



TO THE LAND OF
"SUNSHINE"

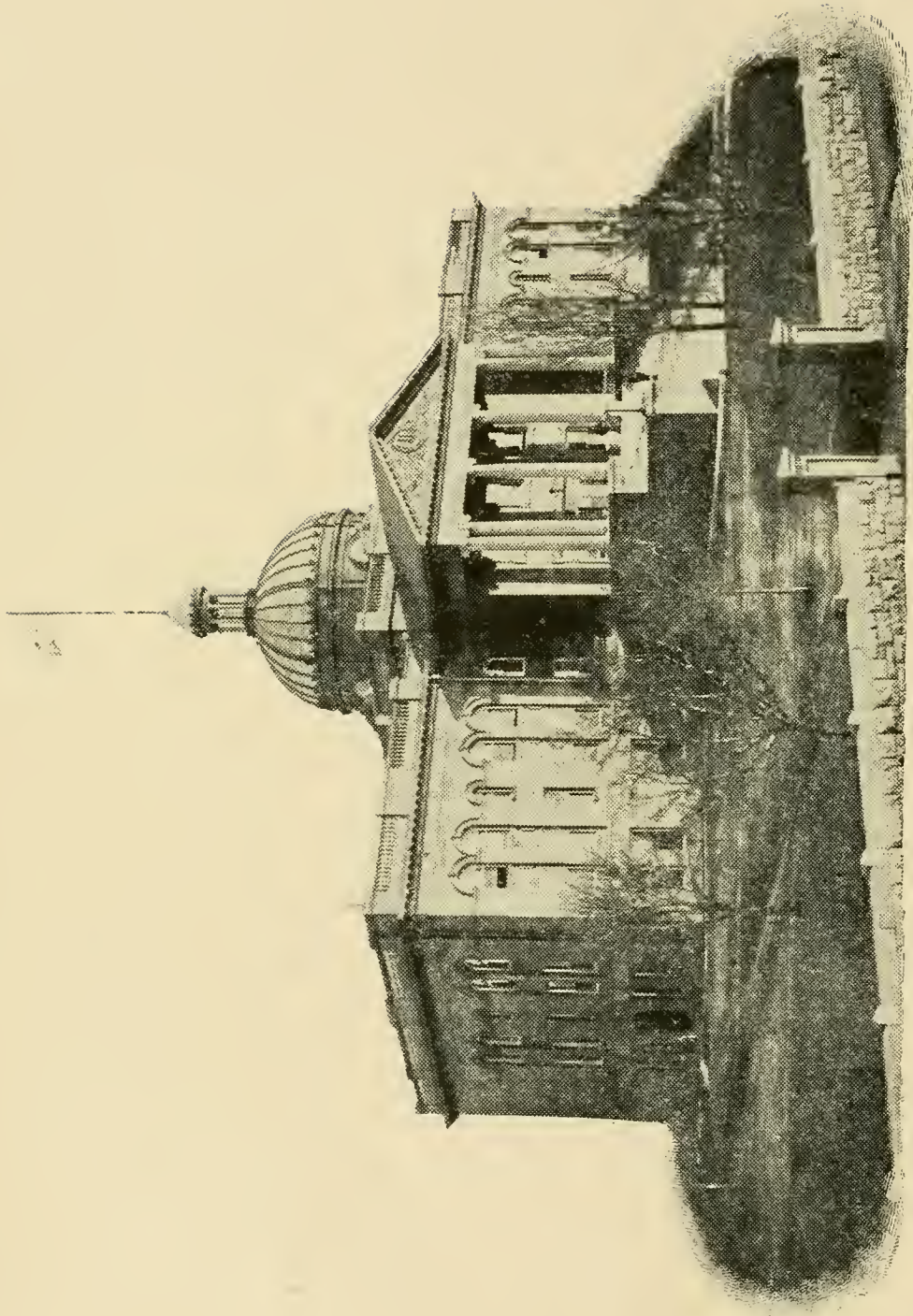




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THE CAPITOL OF NEW MEXICO AT SANTA FE.

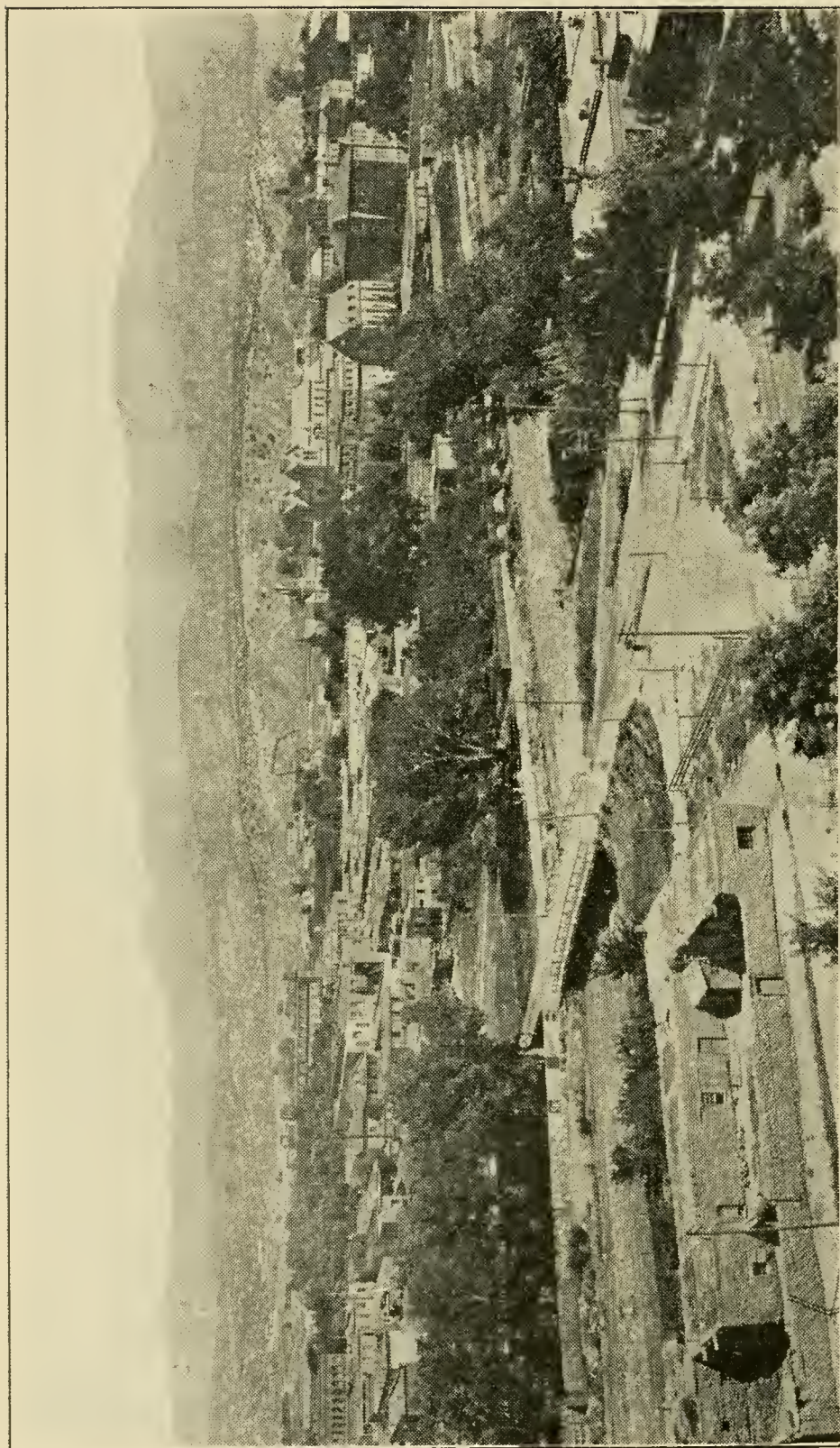
THE LAND OF SUNSHINE

A Handbook of the Resources, Products,
Industries and Climate of New Mexico.



Compiled and Edited by
MAX. FROST and PAUL A. F. WALTER,
New Mexico,
Under and by the Authority of the Bureau of Immigration.

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VIEW FROM THE CAPITOL AT SANTA FE.

resources and proximity to the markets of Mexico and the Orient.

For the Husbandman.

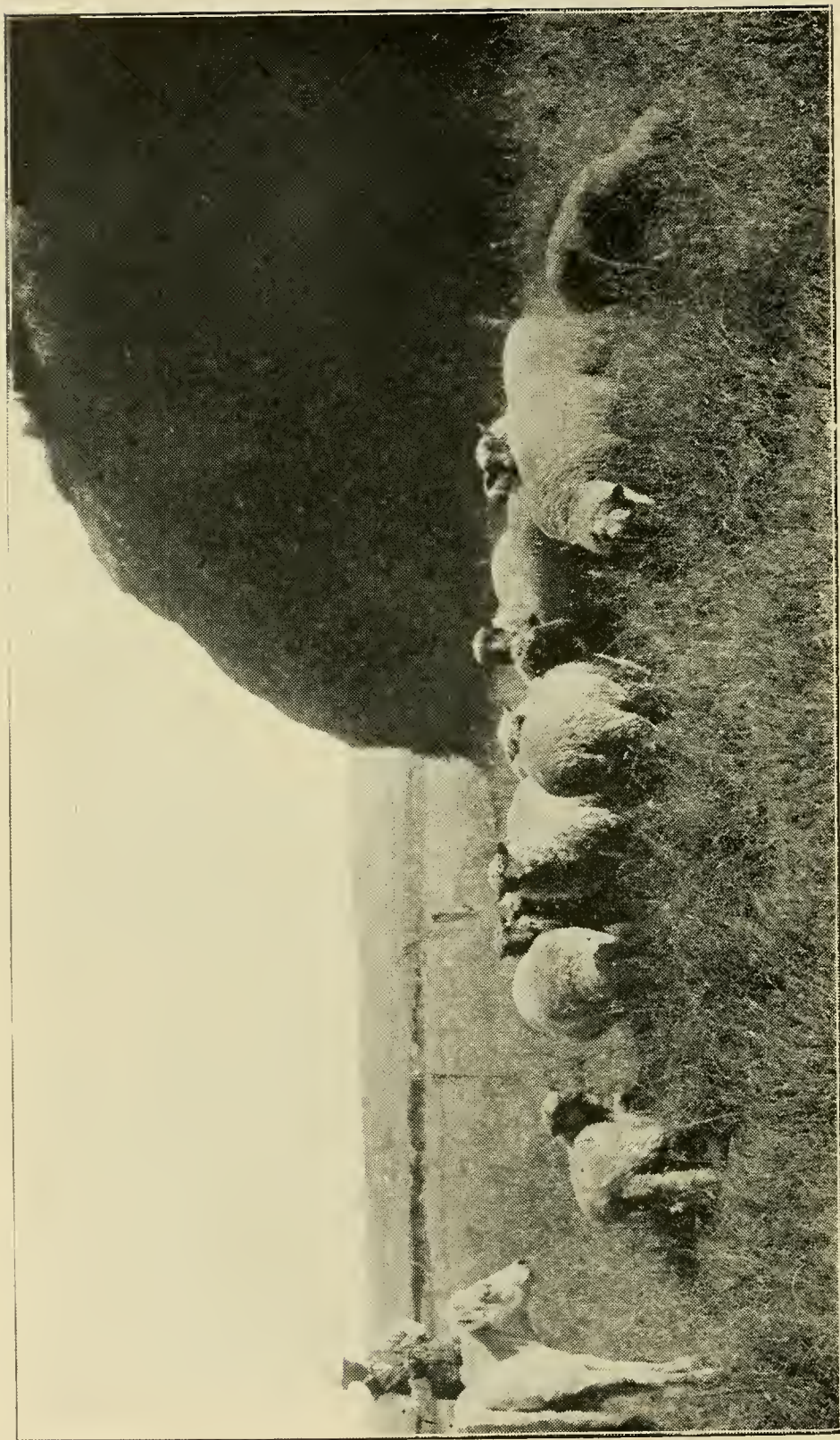
Farmers are wanted to till the soil under the most favorable conditions and with home markets that pay better prices than any eastern market. Only a quarter of a million of acres are under cultivation; four times that area is immediately available for agricultural purposes. Not one-half of the flowing waters are utilized and not one-fiftieth of the flood waters are stored. New Mexico raises the finest fruit in the world and every other crop that can be produced anywhere in the temperate zone. Yet, it imports annually millions of dollars worth of flour, alfalfa, hay, potatoes, garden produce, poultry, eggs, butter and other products that it can and should raise at home. Free lands, an ideal climate, irrigation, churches, schools, railroad facilities, home markets, good prices and extensive range, are all factors which help to make the life of the farmer and stock grower in New Mexico pleasant and prosperous.

For the Miner.

Miners are needed. New Mexico lies in the same mineral zone as Colorado with the difference that Colorado has been well prospected and the opportunities and chances for discovering bonanzas are very limited, while in New Mexico, there has been very little systematic prospecting and the mining field is open to every newcomer.

For the Health Seeker.

Health seekers are invited. New Mexico does not intend to shut the door upon them. Eastern physicians recognize that its climate offers the best conditions under which those suffering from lung, throat and nervous troubles can effect a cure. Colorado climate is good, California climate is good, Arizona climate is better, but New Mexico climate is best of all. This is no longer a theory, but an acknowledged fact. The United States government has recognized the superiority of New Mexico in this respect by establishing in the Territory a Marine Hospital for consumptives at Fort Stanton and an Army and Navy Hospital for consumptives at Fort Bayard, and

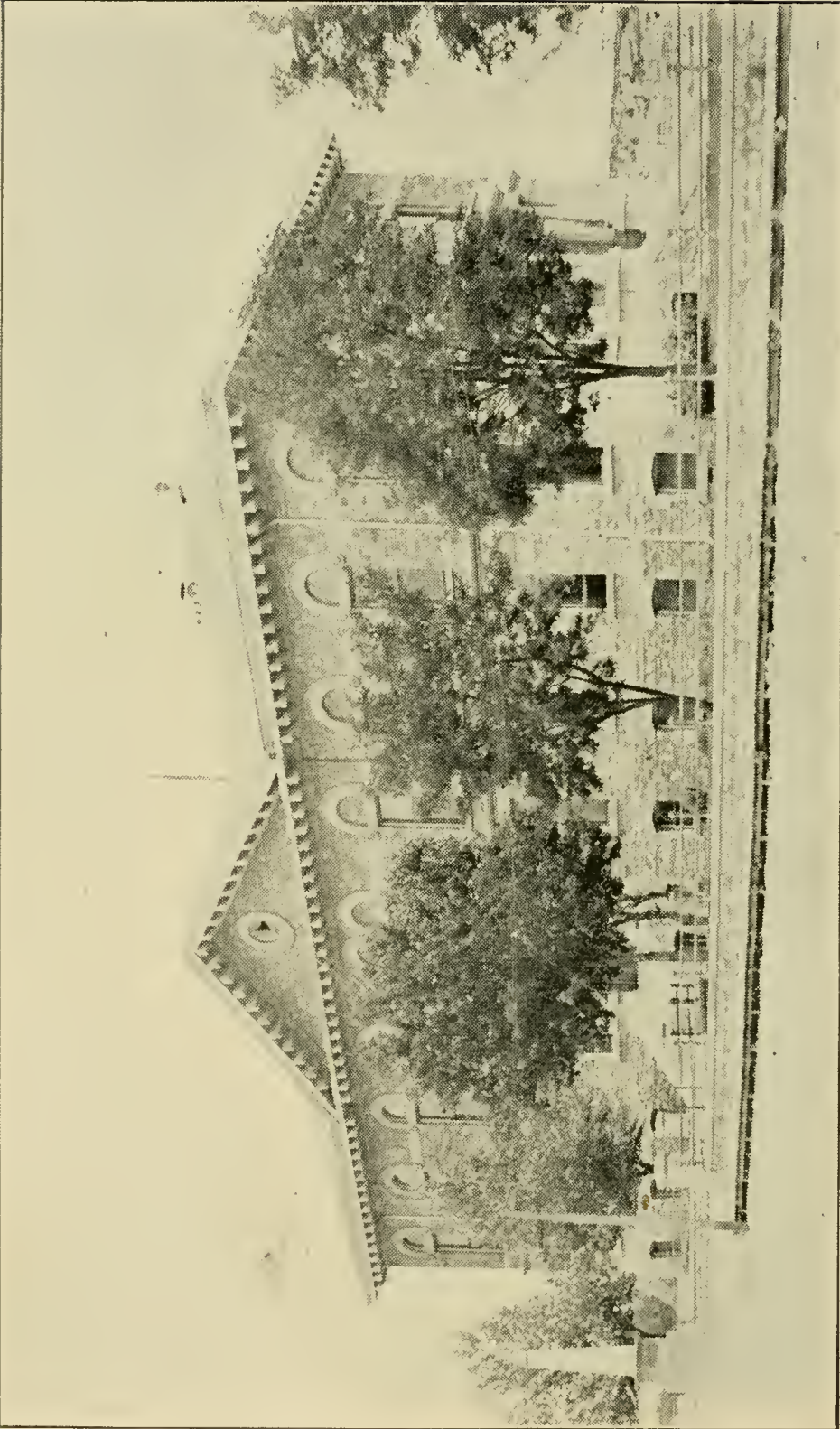


SHEEP AND ALFALFA IN CHAVES COUNTY.

the story of the cures that have been achieved, is now a part of official records. Ample accommodations are offered by tent cities, hotels, sanitarium and homes in the larger towns as well as the smaller settlements and at the various hot springs, which latter are gaining renown for their potent medicinal virtues.

For the Tourist.

Tourists are welcomed. New Mexico has superb mountain scenery, quiet and picturesque valleys, unparalleled historic and prehistoric attractions. It is the land of the Cliff Dwellers; of the Pueblo Indians; of the Indian dances; of the Conquistadores; of towns and buildings older than the oldest historic monuments of any other part of the United States; of scenery grand and unique; and to the sportsman it offers good hunting and excellent fishing.



FEDERAL BUILDING AT SANTA FE.

CHAPTER II.

STATISTICS.

WHAT has been accomplished here by the comparative few, with the employment of limited capital and by a mere touch of development, is demonstrated by the following figures which have been carefully compiled from official statistics:

Area: 122,469 square miles.

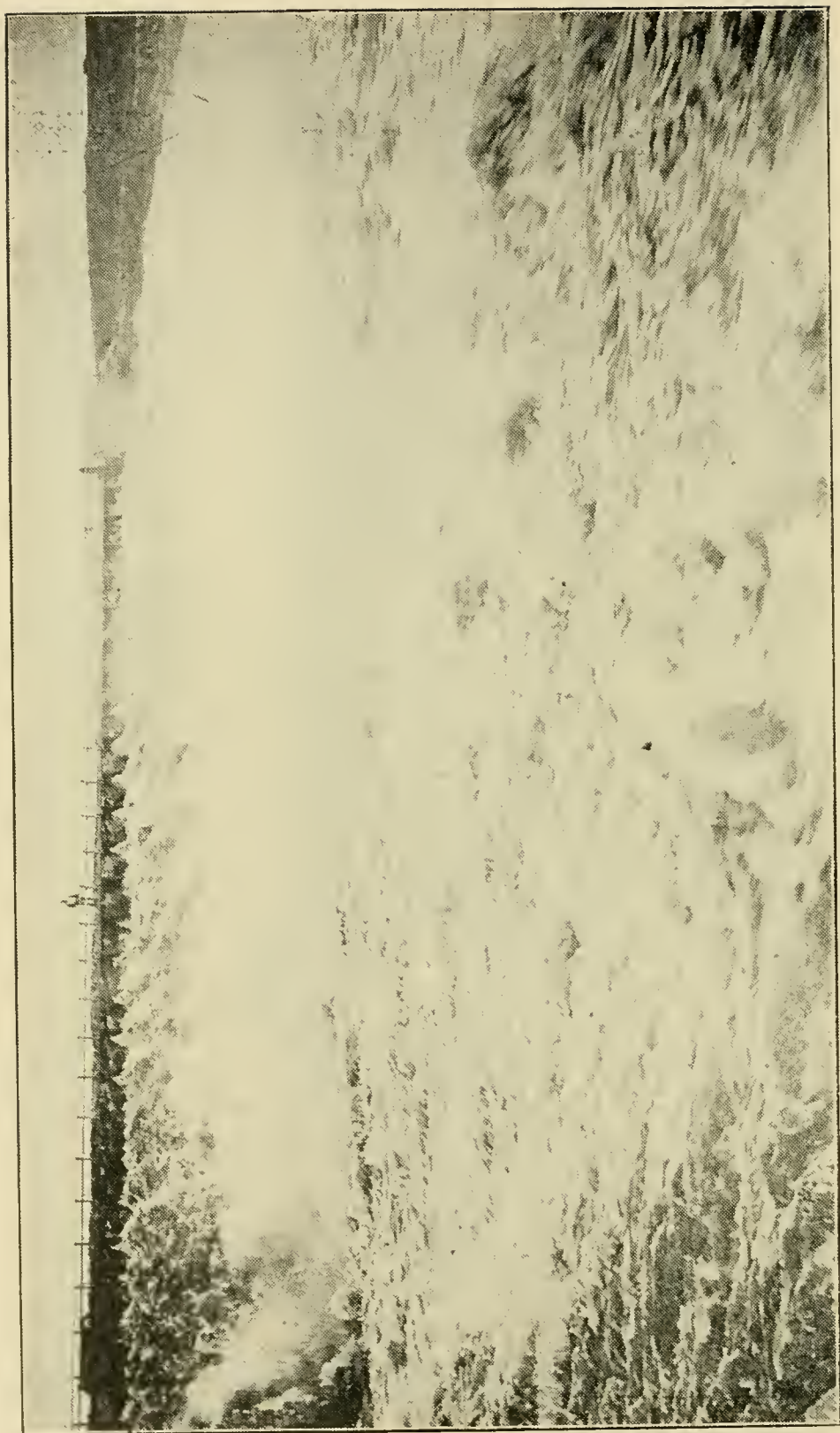
Population.

Estimated population, 284,000, in 1904: by the census of 1900, 195,310; 1890, 153,503; 1880, 119,565; 1870, 91,874; 1860, 87,034; including Arizona and southern Colorado, 1850, 61,547. Of the present population, 144,000 came from the states or are children of parents from the states; 127,000 are of native Spanish or Mexican descent; 13,000 are Indians. Of the 66,396 wage-earners in the census year of 1900, 40 per cent or 27,215 were engaged in agricultural pursuits; 19,478 in domestic service; 10,378 in manufacturing, mining and as mechanics; 7,208 in trade, and 2,118 in the professions or in government service.

An estimate of the population of New Mexico from registration and school census returns: Males of voting age, 69,000; females of the same age, 68,000; persons of school age, 68,000; foreigners not citizens, 5,000; Indians, 13,000; children under the age of five, 61,000; total, 284,000.

Farms and Farm Products.

Number of farms, 1890, 4,458; in 1900, 11,834. Acres in farms in 1890, 787,882; in 1900, 5,130,878. Value of farms in 1890, \$33,543,141, in 1900, \$53,737,824. Value of farm lands, 1890, \$8,140,800; 1900, \$20,888,824. Value of farm implements, 1890, \$291,140; 1900, \$1,151,610. Value of live stock, 1890, \$25,111,201; 1900, \$31,727,400. Value of farm products, 1890, \$2,000,000; 1900, \$10,000,000. Acres in alfalfa, 1890, 12,139;



LAKE AVALON SPILLWAY, EDDY COUNTY.

1900, 55,467. Acres under cultivation, 1890, 91,745; 1900, 203,083. Butter, 1890, 105,000 pounds; 1900, 381,000 pounds. Eggs, 1890, 280,000 dozen; 1900, 840,000 dozen. Hay, 1900, \$1,427,317. Cereals, 1900, \$978,903. Vegetables, 1900, \$278,413. Orchards, 1900, \$197,331. Other products, 1900, \$374,537. Acres under irrigation, 1900, 326,873. Improved farms, 1900, 12,411. Farms under irrigation, 1900, 9,128. Value of irrigated farms, 1900, \$13,551,582. Value of non-irrigated farms, 1900, \$3,773,177.

The above statistics do not take into consideration the lands cultivated by the Indians, the Pueblos being farmers and great producers of crops; nor of crops raised on farms of less than three acres, of which there are many.

Climate.

The United States weather bureau at Santa Fe, which covers the entire Territory, reports for 1903, 29 cloudy days out of 365; 80 per cent of sunshine; a maximum velocity of the wind of 46 miles an hour, and an average velocity of 6.8 miles an hour; an annual mean temperature of 48.7 per cent; a maximum temperature of 89 degrees; a minimum temperature of 4 degrees; a precipitation of 9.79 inches, a maximum monthly precipitation of 2.49 inches, a minimum monthly precipitation of 0.02 of an inch.

Lands.

Subject to entry under the federal land laws June 30, 1903, 52,000,000 acres. Included in the three forest reserves, 5,125,000 acres; in land grants approved by congress or the courts 9,963,200 acres; by the court of private land claims, 1,934,986 acres. The land grants approved by congress include 549,065 acres belonging to the Indians. Public lands entered from June 30, 1900, to June 30, 1903, 2,179,738 acres. By years: From June 30, 1900, to June 30, 1901, 655,739 acres; June 30, 1901, to June 30, 1902, 441,871 acres; June 30, 1902, to June 30, 1903, 1,082,128 acres. Of the above areas the following were entered under the homestead laws from June 30, 1900, to June 30, 1903, 1,120,477 acres. By years: From June 30, 1900, to June 30, 1901, 265,524 acres; from June 30, 1901, to June 30,



BERNALILLO COUNTY COURT HOUSE
AT ALBUQUERQUE.

1902, 396,757 acres; from June 30, 1902, to June 30, 1903, 468,196 acres.

Desert land entries, June 30, 1900, to June 30, 1903, 129,395 acres. By years: From June 30, 1900, to June 30, 1901, 8,472 acres; from June 30, 1901, to June 30, 1902, 46,596, acres, from June 30, 1902, to June 30, 1903, 74,565 acres.

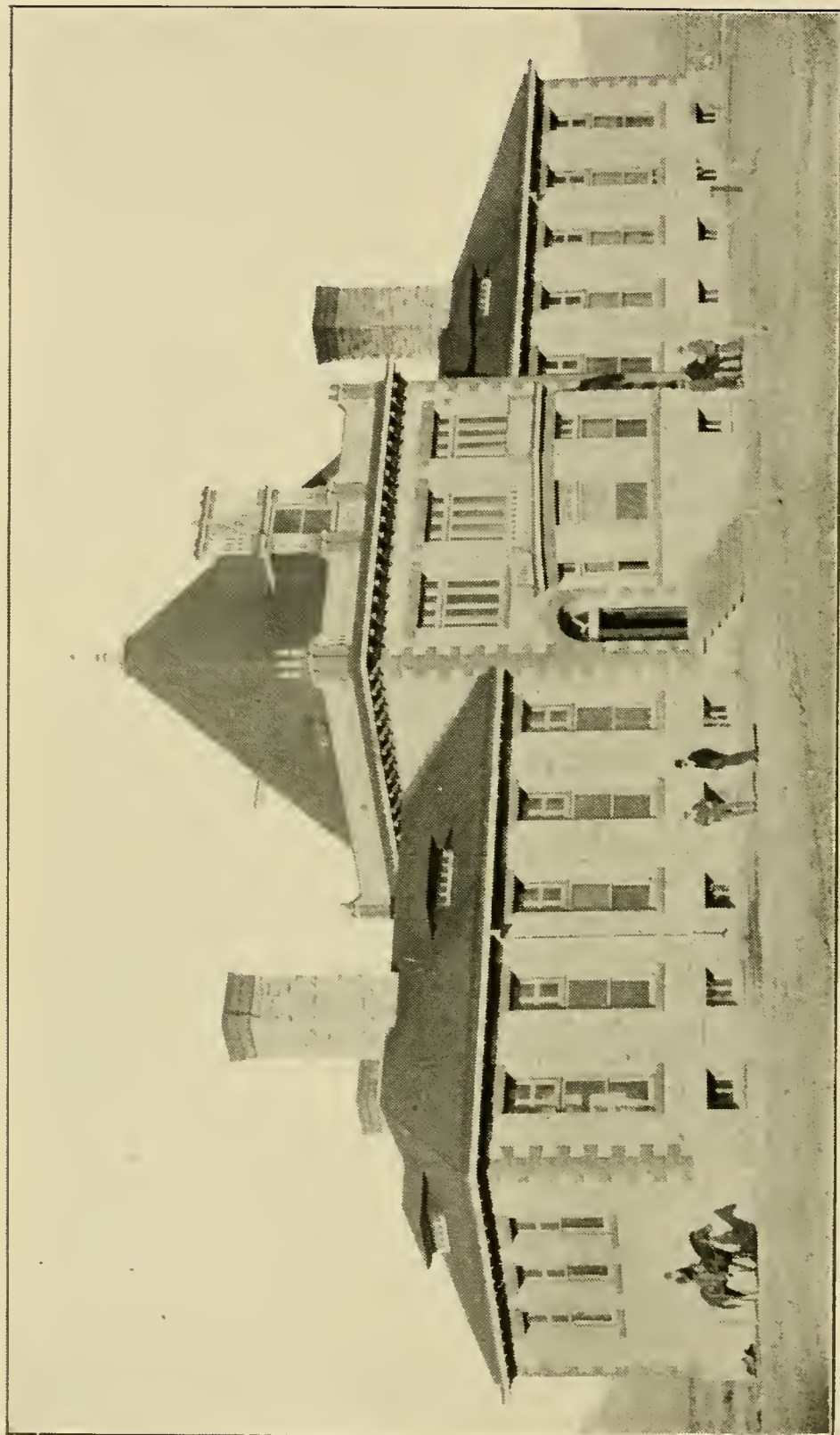
Mineral Production.

From 1860 to 1900 there were produced \$17,600,000 worth of gold. In 1903, New Mexico produced: Gold, \$384,685; silver, \$148,659; copper, \$860,737; lead, \$94,936; a total of \$1,489,016. This does not include the production by individual placer miners or by prospectors not mining in a systematic manner. In addition there were produced large quantities of coal, iron, turquoise, gypsum, building material, and a number of useful minerals and precious stones.

The Colorado Fuel and Iron Company during the fiscal year hauled 138,151 long tons of iron ore out of Grant county. The director of the mint gives the gold production of New Mexico for 1903 at \$531,000, and of silver at \$586,000.

Coal.

Area of prospected coal lands, 1,493,480 acres; amount of coal in sight, 8,813,840,000 tons valued at \$10,000,000,000. Coal produced from June 30, 1900, to June 30, 1903, 3,710,000 tons, valued at \$5,011,281. Coke produced during the same period, 94,697 tons, valued at \$252,642. There were twenty-eight coal mines worked during the past year; three new mines were opened, one resumed, and two were abandoned. Coal produced from June 30, 1900, to June 30, 1901, 1,217,230 tons, valued at \$1,605,174; from June 30, 1901, to June 30, 1902, 1,322,944 tons, \$1,609,848; from June 30, 1902, to June 30, 1903, 1,359,530 tons, valued at \$1,795,208. Coke as follows: From June 30, 1900, to June 30, 1901, 42,732 tons, valued at \$117,516; from June 30, 1901 to June 30, 1902, 25,012 tons, valued at \$58,207; from June 30, 1902, to June 30, 1903, 26,353 tons, valued at \$76,919. Men employed in the coal mines June 30, 1901, 1,870; June 30, 1902, 1,682; June 30, 1903, 2,341.



NEW MEXICO SCHOOL OF MINES AT SOCORRO.

Railroads.

There were 1,679 miles of railroad on June 30, 1900; 1,981 miles on June 30, 1901; 2,263 miles on June 30, 1902; 2,520 miles on June 30, 1903, a total increase in three years of 841 miles.

Stock.

According to the best estimates, there are here 1,123,000 head of cattle; 5,674,000 sheep, 250,000 goats, 97,500 horses. The wool crop in 1903 was 22,000,000 pounds. During the last fiscal year there were shipped out of the territory 184,602 cattle, 5,562 horses and 422,252 sheep.

Internal Revenue.

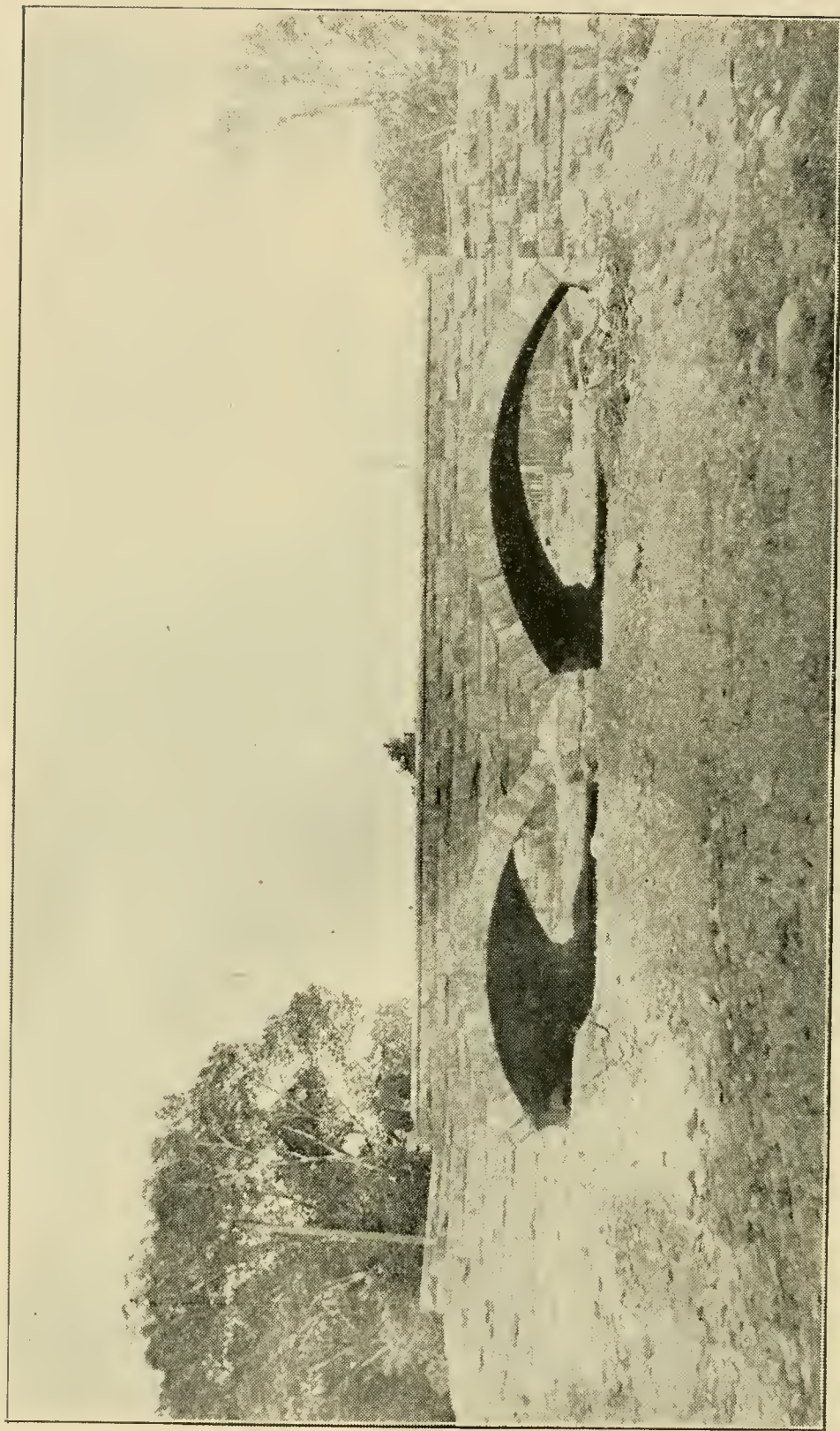
From June 30, 1900, to June 30, 1903, New Mexico paid \$130,375 in internal revenue. For the year ending June 30, 1903, \$33,918; for the year ending June 30, 1902, \$37,847; for the year ending June 30, 1901, \$58,607.

Incorporations.

In the past three fiscal years 553 companies filed incorporation papers, with a capitalization of \$309,711,966 with the Territorial Secretary. In the fiscal year ending June 30, 1901, 149 companies incorporated with a capital stock of \$89,735,925; in the fiscal year ending June 30, 1902, 204 companies incorporated, with a capitalization of \$119,446,500; in the year ending June 30, 1903, 200 companies incorporated, with a capitalization of \$100,529,541. Incorporation fees paid to the Territorial Treasurer were as follows: Fiscal year 1900, \$5,772.25; 1901, \$7,640.75; 1902, \$10,706; 1903, \$13,628.50, a total of \$37,747.50.

Assessment.

In 1900, property real and personal, subject to taxation, was \$36,364,761; in 1901 the assessment was \$36,977,047; in 1902, \$38,633,993; in 1903 it had risen to \$41,832,566, including exemptions amounting to \$2,235,615, leaving an assessment subject to taxation of \$39,596,951. Property in New Mexico is assessed at an average of only 30 per cent of its real value.



STONE BRIDGE OVER THE SANTA FE RIVER AT SANTA FE.

Indebtedness.

On June 30, 1901, the indebtedness of the Territory was \$1,180,800; on June 30, 1902, it was \$1,123,300 and the sinking fund \$89,246; on June 30, 1903, the indebtedness was \$1,098,000 and the sinking fund \$234,590. This shows a reduction of \$270,090 in three years. On June 30, 1904, the bonded indebtedness was \$1,062,900, and the sinking funds amounted to \$208,165.

Taxes Collected.

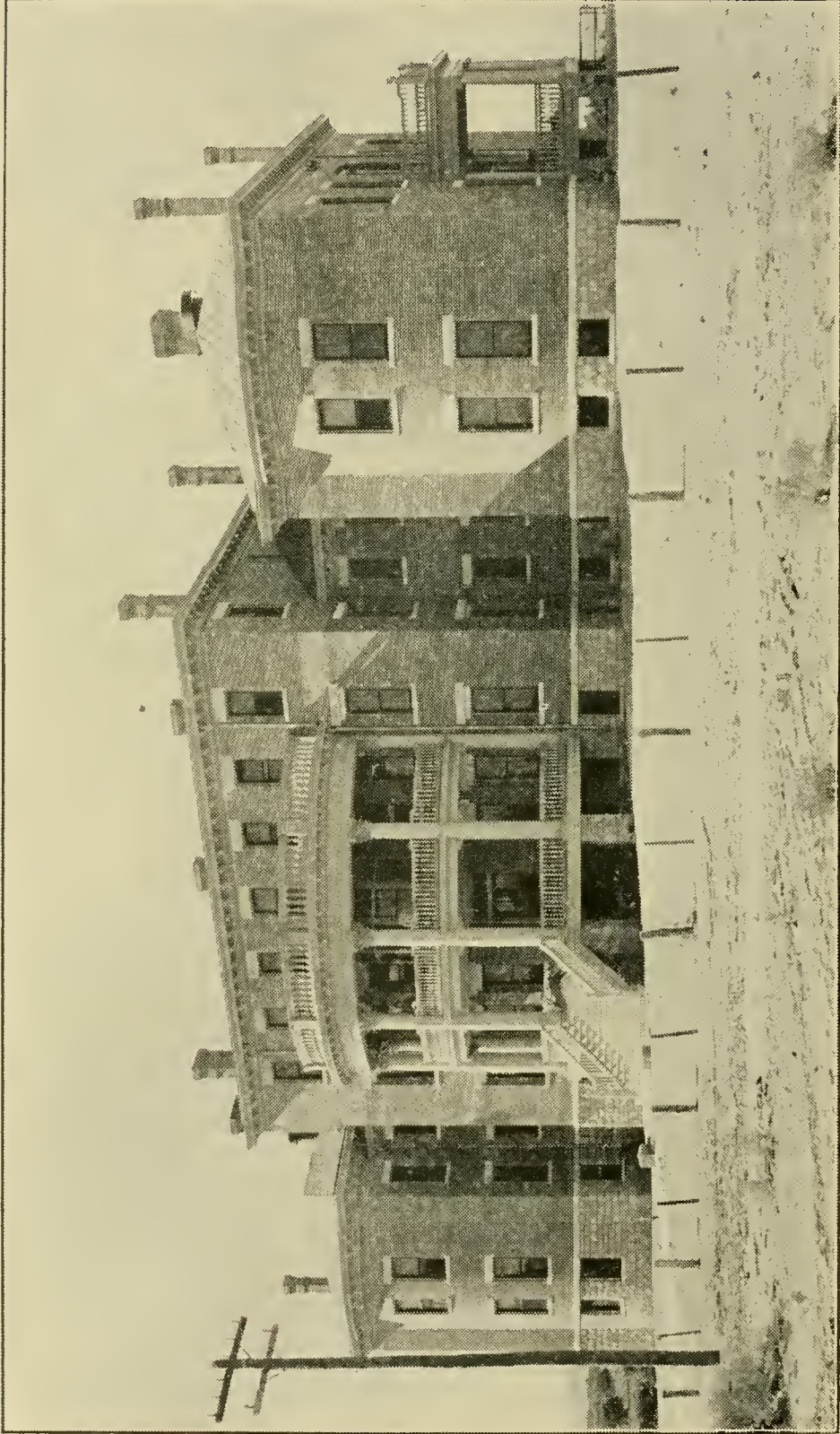
Revenue of the Territory the past three years was \$1,545,241; of which \$1,127,689 came from direct taxation; \$419,622 collected during the fiscal year ending June 30, 1903; \$332,328 collected during the fiscal year ending June 30, 1902, and \$375,738 for the fiscal year ending June 30, 1901. From other sources Territorial revenue was derived to the amount of \$407,542, \$142,758 being received during the fiscal year ending June 30, 1901; \$118,005 during the year ending June 30, 1902, and \$156,788 during the year ending June 30, 1903.

Federal appropriations for disbursement in New Mexico during the fiscal year ending June 30, 1903, \$423,070.

Territorial tax rate, 1900, 14.05 mills; 1901, 14.28 mills; 1902, 13.09 mills; 1903, 15.51 mills; 1904, 14 mills.

Insurance Companies.

During the past three fiscal years insurance companies authorized to do business in New Mexico collected in premiums \$1,998,444 and paid out for losses, \$672,415. Life insurance companies wrote in the three years, policies amounting to \$6,552,669; fire insurance companies \$39,233,614; and miscellaneous insurance companies, \$5,246,885; a total of \$51,033,168. During the fiscal year ending June 30, 1903, there were written in New Mexico life insurance policies amounting to \$3,095,854, fire insurance policies to the amount of \$15,549,968, miscellaneous policies to the amount of \$2,916,414, and premiums collected to the amount of \$766,389; while in the year previous \$655,015 were collected in premiums, and the year previous to that \$577,039; losses paid during the past fiscal year, \$251,342; the year previous, \$234,236, and the year previous to that \$186,836.



ST. JOSEPH'S SANITARIUM AT ALBUQUERQUE.

Public Buildings and Grounds.

The Territory maintains fifteen Territorial institutions, the value of their buildings and grounds is \$2,000,000, without the grants of public lands made to them by congress. In addition, the Territory grants subsidies to seven hospitals and an orphan asylum maintained by religious and charitable organizations. The value of the public school property of the Territory is \$690,697, not counting the school sections in each township. The value of the public property of counties and towns, not counting grants to towns like Santa Fe, Las Vegas, Albuquerque, Socorro, etc., is \$495,000, making a total value of public property, not including lands, of \$3,185,697.

Educational.

School population: 1903, 68,152; 1902, 62,864; 1901, 53,008. The school population includes all persons between the ages of five and twenty-one years, and the census is taken annually.

Enrollment in the public schools: 1903, 37,646; 1902, 35,327. 1901, 31,510; 1900, 21,761.

Average daily attendance: 1903, 24,856; 1902, 22,573; 1901, 19,451.

Public schools: 1903, 665; 1902, 603; 1901, 599.

Teachers: 1903, 757; 1902, 712; 1901, 671.

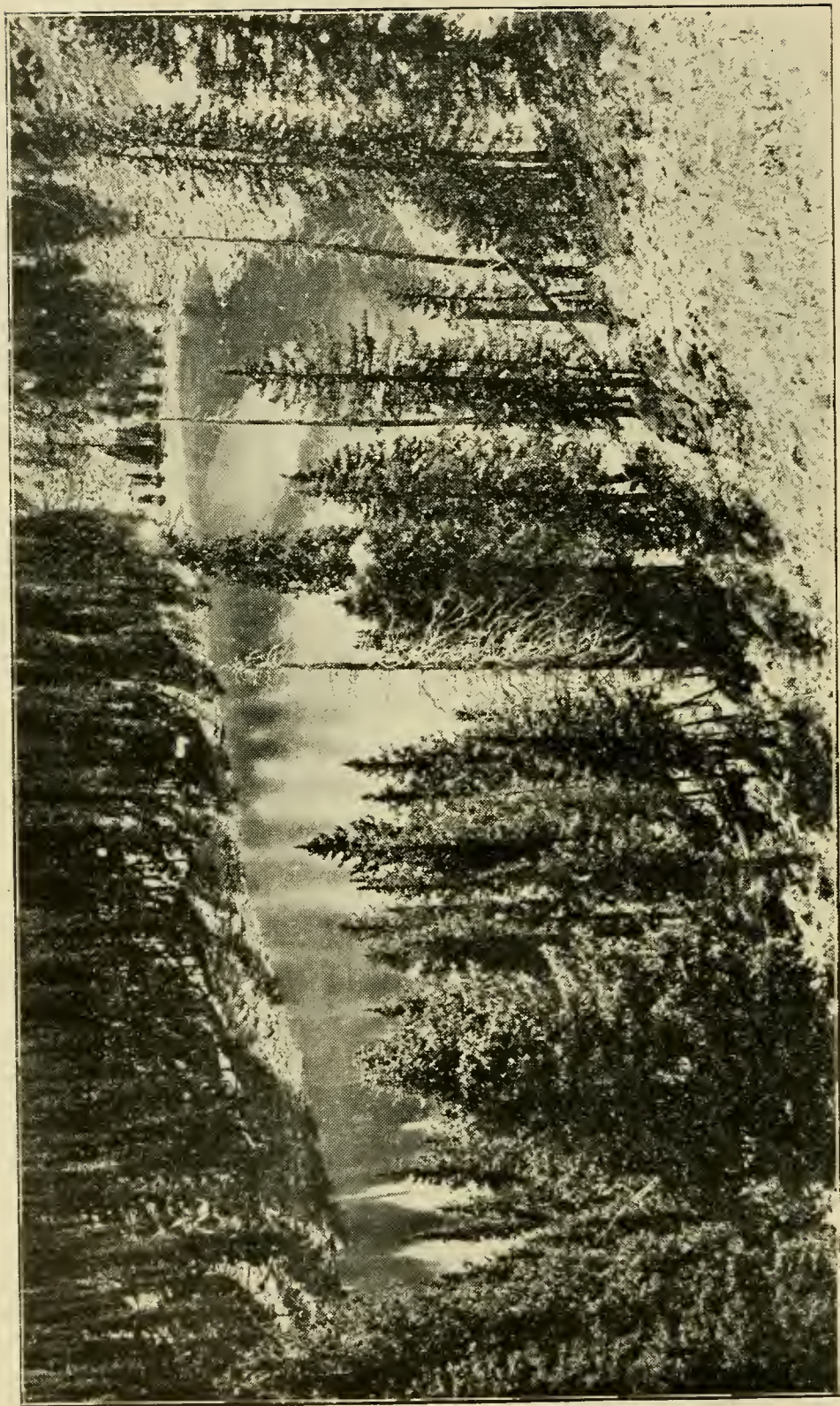
Expenditures: 1903, \$287,545; 1902, \$324,784; 1901, \$202,882.

Receipts from all sources: 1903, \$454,342; 1902, \$424,365.

Average school term four months; average salary paid teachers, \$56 a month; total value of all school property, \$2,071,702; enrollment of pupils in all of the schools, 42,925; annual expenditures for all of the schools, \$722,048; total expenditures for the public schools the past three years, \$815,212.

Churches.

The Roman Catholic Church in New Mexico has one archbishop, one bishop, one vicar general, forty-six priests, and forty-three secular priests. It has forty-two churches with resident priests, 325 mission churches, six academies for young girls, one college, eight parochial schools, two board-



LAKE, 12,000 FEET ABOVE LEVEL OF THE SEA, ON PECOS FOREST RESERVE.

ing schools for Indians, with 300 pupils, two day schools for Indians, with 200 pupils: two academies for boys.

Presbyterian, forty-seven congregations, thirty preaching stations, 2,225 members; 1,936 Sunday school members; value of school property, \$86,500; twenty-four mission schools taught by forty-five teachers, and an enrollment of 1,750 pupils.

The Protestant Episcopal Church has parishes in all of the larger towns and is doing energetic missionary work. New Mexico and Arizona form a missionary diocese, with episcopal headquarters at Phoenix, Arizona.

Methodist Episcopal, seventeen English speaking congregations, a number of Spanish speaking congregations and several mission schools.

Baptist Churches thirty-six, of which four became self supporting during the past year, one college, and a number of mission schools.

Lutheran Churches three.

Mormons, two churches, with 277 souls. A few scattered members in addition at Bloomfield.

The Congregational, five churches, 302 members, six mission schools, 500 pupils.

The Christian and other Protestant denominations have about twenty congregations in the Territory.

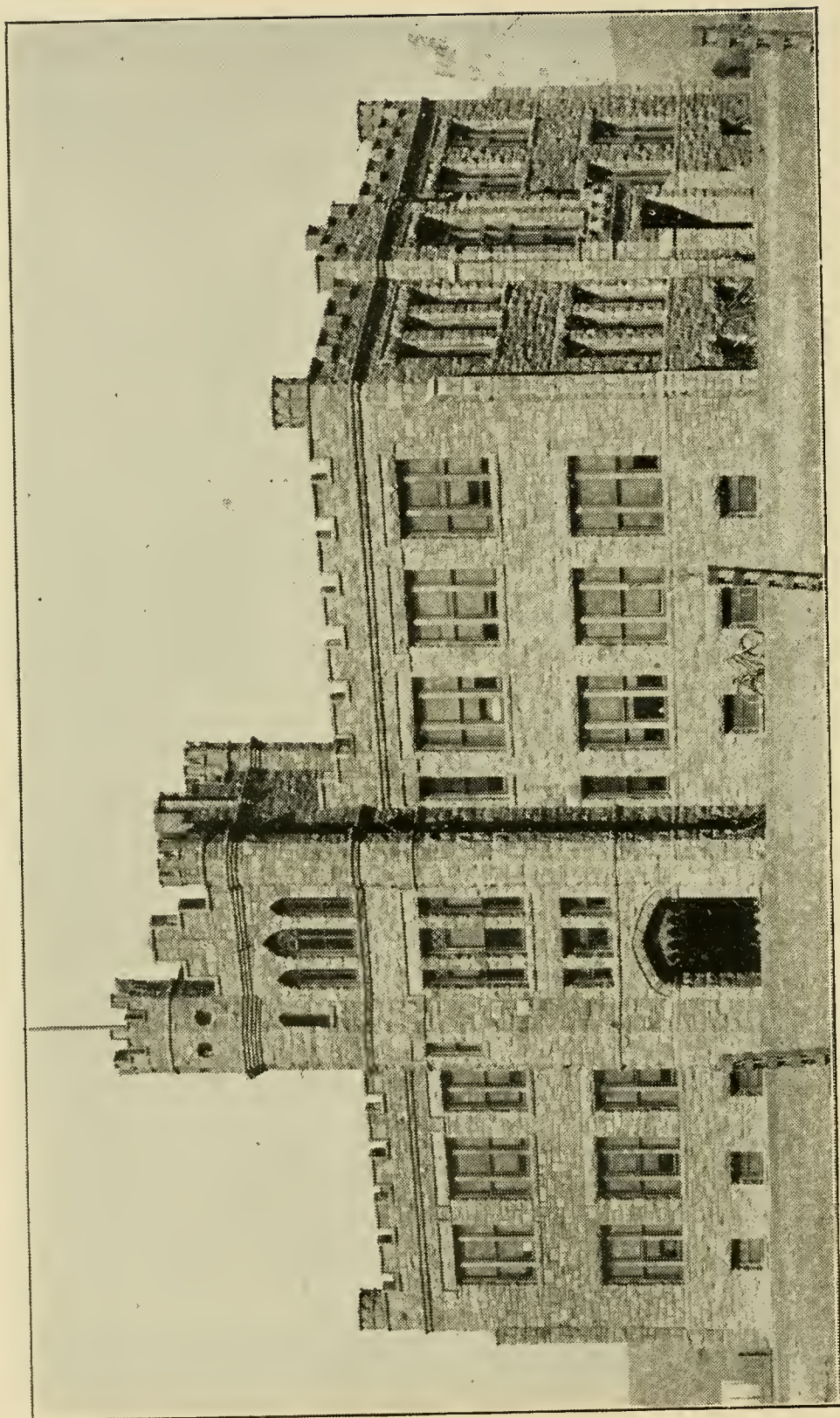
The Hebrews have synagogues at Las Vegas and Albuquerque, and have church organizations in three or four of the larger cities. The number of Hebrews in the Territory is 695.

Newspapers.

There are seventy-five newspapers published in New Mexico, six of them daily, sixty-four weekly, and five monthly. Five of the daily papers have a complete Associated Press service.

New Towns.

The many new towns that have been founded, since the coming of railroads to New Mexico and their steady growth, are proof that the Territory is not standing still. Within the



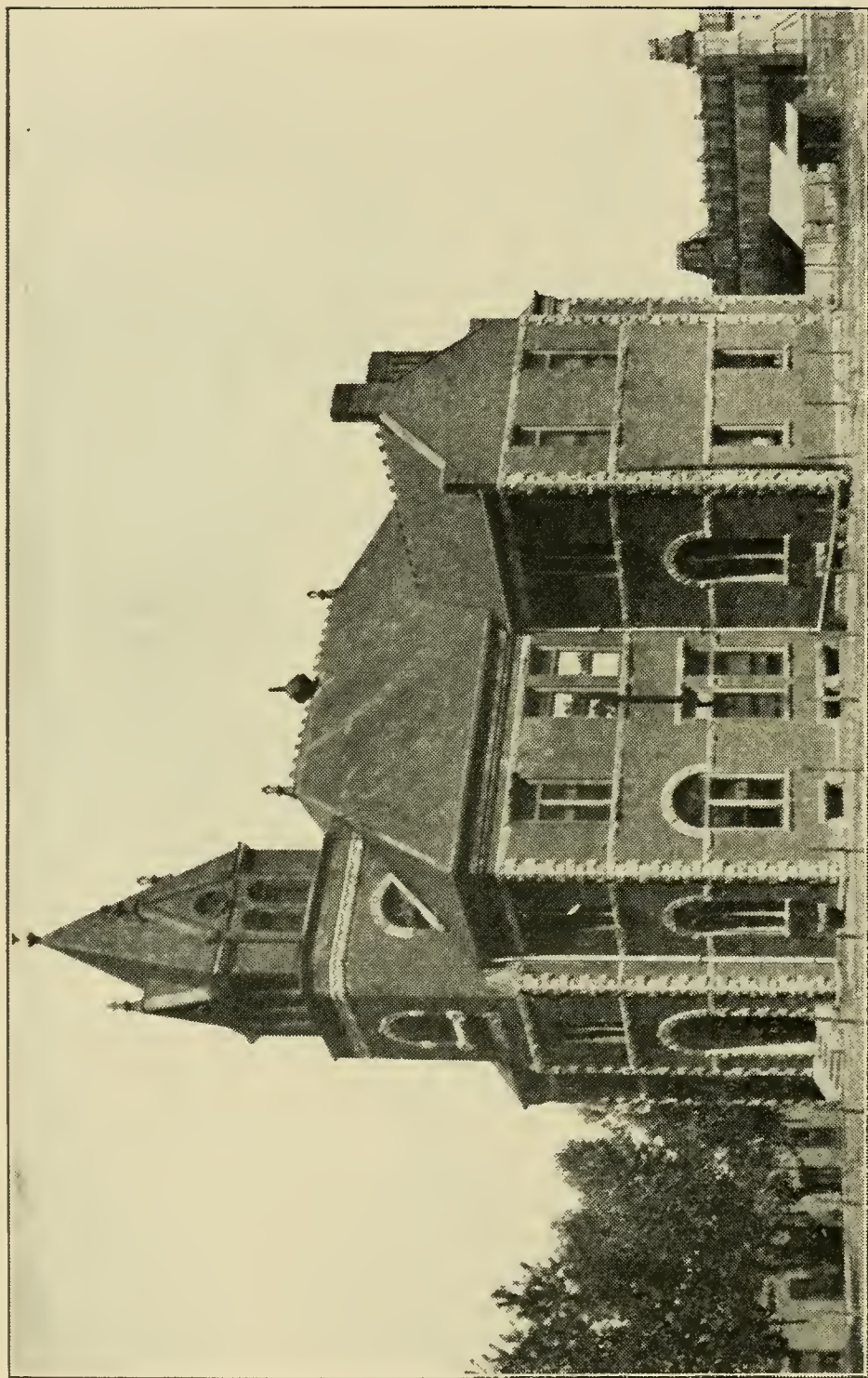
PUBLIC SCHOOL BUILDING AT LAS VEGAS.

last five years, cities and towns like Alamogordo, Portales, Tucumcari, Capitan, Estancia, Artesia and Roy have been founded, while Roswell, Carlsbad, Gallup, Aztec and many others are settlements of recent birth, and it is only in the past two decades that Albuquerque, Las Vegas and Raton have developed from small villages into hustling, progressive cities.

Banks.

The following twenty-one national banks, fifteen of them established since 1900, are today doing business in New Mexico. The date of their establishment and their paid-up capital are given, not including surplus or undivided profits: First National Bank of Alamogordo, Otero county, established 1900, capital \$36,800; First National Bank, Albuquerque, Bernalillo county, 1878, \$200,000; State National Bank, Albuquerque, 1904, \$100,000; First National Bank, Artesia, 1904, \$25,000; First National Bank, Belen, 1903, \$25,000; First National Bank, Carlsbad, 1900, \$50,000; National Bank of Carlsbad, 1903, \$30,000; First National Bank, Clayton, 1900, \$50,000; Deming National Bank, Deming, 1903, \$10,000; First National Bank, Farmington, 1902, \$25,000; First National Bank, Las Vegas, 1879, \$100,000; San Miguel National Bank, Las Vegas, 1880, \$100,000; First National Bank, Portales, 1902, \$25,000; First National Bank, Raton, 1902, \$75,000; First National Bank, Roswell, 1892, \$50,000; Citizens' National Bank, Roswell, 1902, \$50,000; Roswell National Bank, 1903, \$50,000; First National Bank, Santa Fe, 1870, \$150,000; First National Bank, Santa Rosa, 1902, \$25,000; Silver City National Bank, Silver City, 1886, \$50,000; First National Bank, Tucumcari, 1902, \$25,000.

The following were the state banks doing business in the Territory on July 1, 1904, and their capital stock: Andrew Morton & Company, Springer, \$5,000; Bank of Deming, Deming, \$30,000; Bank of Commerce, Albuquerque, \$82,400; Exchange Bank, White Oaks, \$30,000; Bank of Portales, Portales, \$30,000; Plaza Trust & Savings Bank, Las Vegas, \$15,000; Sierra County Bank, Hillsboro, \$30,000; J. N. Broyles, San Marcial, \$20,000; Las Vegas Savings Bank, Las Vegas, \$30,000; Silver City Savings Bank, Silver City, \$15,000.

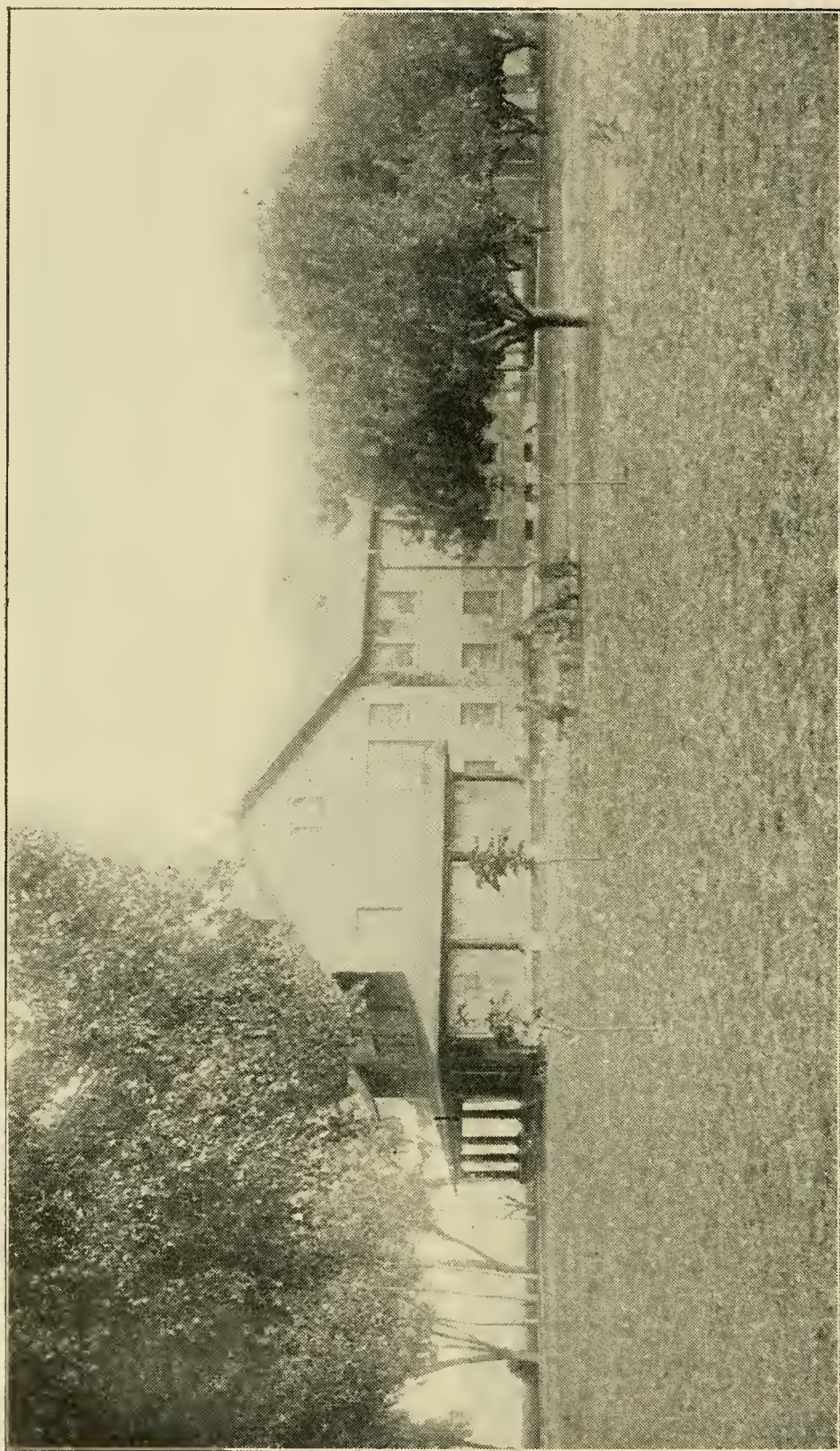


SANTA FE COUNTY COURT HOUSE AT SANTA FE.

CHAPTER III.

THE LAND OF HEALTH AND SUNSHINE.

NEW MEXICO invites metaphors, it compels superlatives. Bathed in sunshine, swept by the cool winds of the mountains, endowed with untold mineral wealth, colored with the hues of the sunset and hal-
lowed by the romance of the Conquistadores and the Franciscans, it stands unique among the commonwealths of the Union. The Land of Sunshine, one talented author calls it: the Land of Poco Tiempo, the Land of Sunshine, Silence and Adobe; the Land of the Turquoise Sky: the Land of the Conquistadores: the Land of the Pueblos: the Land of the Sun King, and many more have been the attempts to coin a distinctive phrase that would characterize the vivid impression that New Mexico's climatological, physical and ethnological characteristics make upon the visitor. "The Land of Health and Sunshine," comes, perhaps, closest in summarizing what gives the Territory its distinctive atmosphere. But there are volumes of romance, of history, of scenic beauties, of climate, of natural wealth, of progress, that can be written and have been written with New Mexico as their subject. But after all has been said, the fact remains, that it is climate and sunshine, that set the Territory apart from the other commonwealths; that directly or indirectly influence all its industries, all its activities, its very nature. Nowhere else in the world is there found a more perfect climate and but few sections can boast of a climate as good. It is not only a lovely day now and then, not only a fine summer or a pleasant winter, but a perfect all-the-year around climate that is making New Mexico the sanitarium of the world, the refuge of those stricken by one or the other of the many forms of lung, throat and nervous troubles and of invalids from other causes. It is this fact which must be borne constantly in mind when reading of New Mexico's resources, developed and undeveloped wealth, and its manifold industries, as they are briefly outlined in this volume.



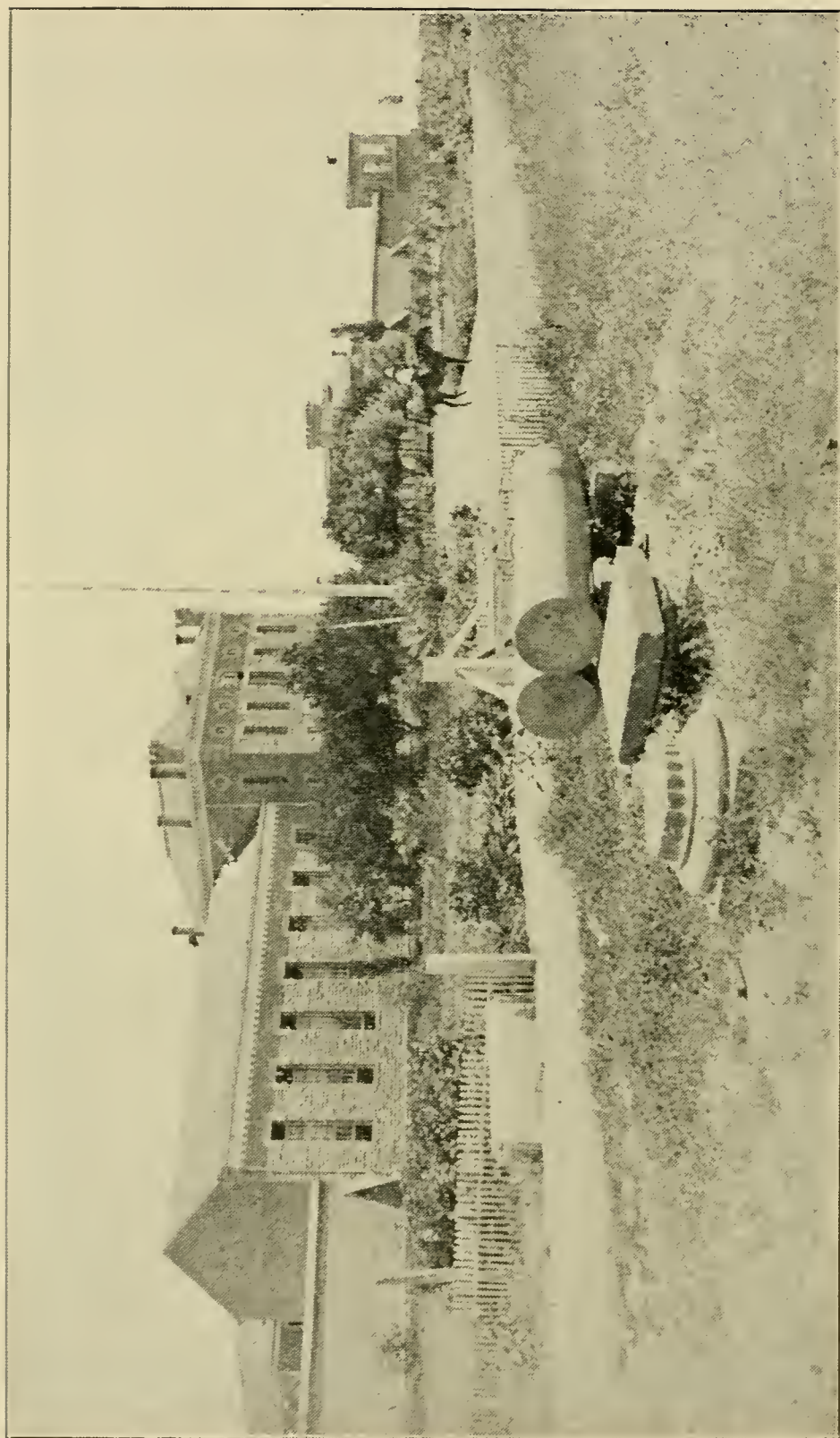
RESIDENCE OF J. J. HAGERMAN, ON SOUTH SPRING RANCH, NEAR ROSWELL.

Physical Features.

New Mexico is part of the roof of the American continent. From one side of this roof the waters flow into the Atlantic and from the other side into the Pacific. The roof not only slopes to the east and to the west but also from the north to the south, there being a difference of 3,000 feet in the average altitude of its northern and of its southern boundaries. The ridge of the roof which traverses the western part of New Mexico varies in altitude from 4,000 to over 13,000 feet. From this ridge branch off at right angles or run almost parallel to it, many majestic mountain ranges and extensive foothills and table lands cut by canons, arroyos and valleys.

The mountains, though varying in name, are all a part of the Rocky Mountain system whose backbone in the northern part is the Sangre de Cristo range, lofty and massive, over a score of its peaks rising to an altitude of 13,000 or more feet. It extends from the Colorado line through Taos, Colfax, Mora and San Miguel, into Santa Fe county and from it flow the streams that water the fertile Santa Fe, Espanola, Taos, Mora, Cimarron and lesser valleys. The Taos, the Pecos, the Santa Fe and the Cimarron ranges are parts of the Sangre de Cristo range, and the Cochiti, the Jemez, the Valles, the San Mateo and the Zuni mountains, a little northwest of the center of the Territory, may be considered as a continuation of it. As the center of the Territory, going southward, is reached, the mountain ranges are more disconnected and less lofty although still massive. Here the Sandia, the Ortiz, the San Pedro, the San Isidro, the Manzanos, the Gallinas, are names for mountains, some of them rich in mineral wealth and others well timbered to their very summits.

Further south, four distinct ranges, broken of course, can be traced, their axes all converging, apparently towards the center. The eastern branch is the loftiest and is known as the White Mountains, rising to an altitude of almost 14,000 feet. Continuing toward the south it is called the Sacramento range, while the Guadalupe in the far southeast are an apparent extension. The second branch is also east of the Rio Grande, commencing to the north as the Oscuro range and continuing southward as the San Andreas and Organ mountains and ter-



MAIN BUILDING, TERRITORIAL PENITENTIARY AT SANTA FE.

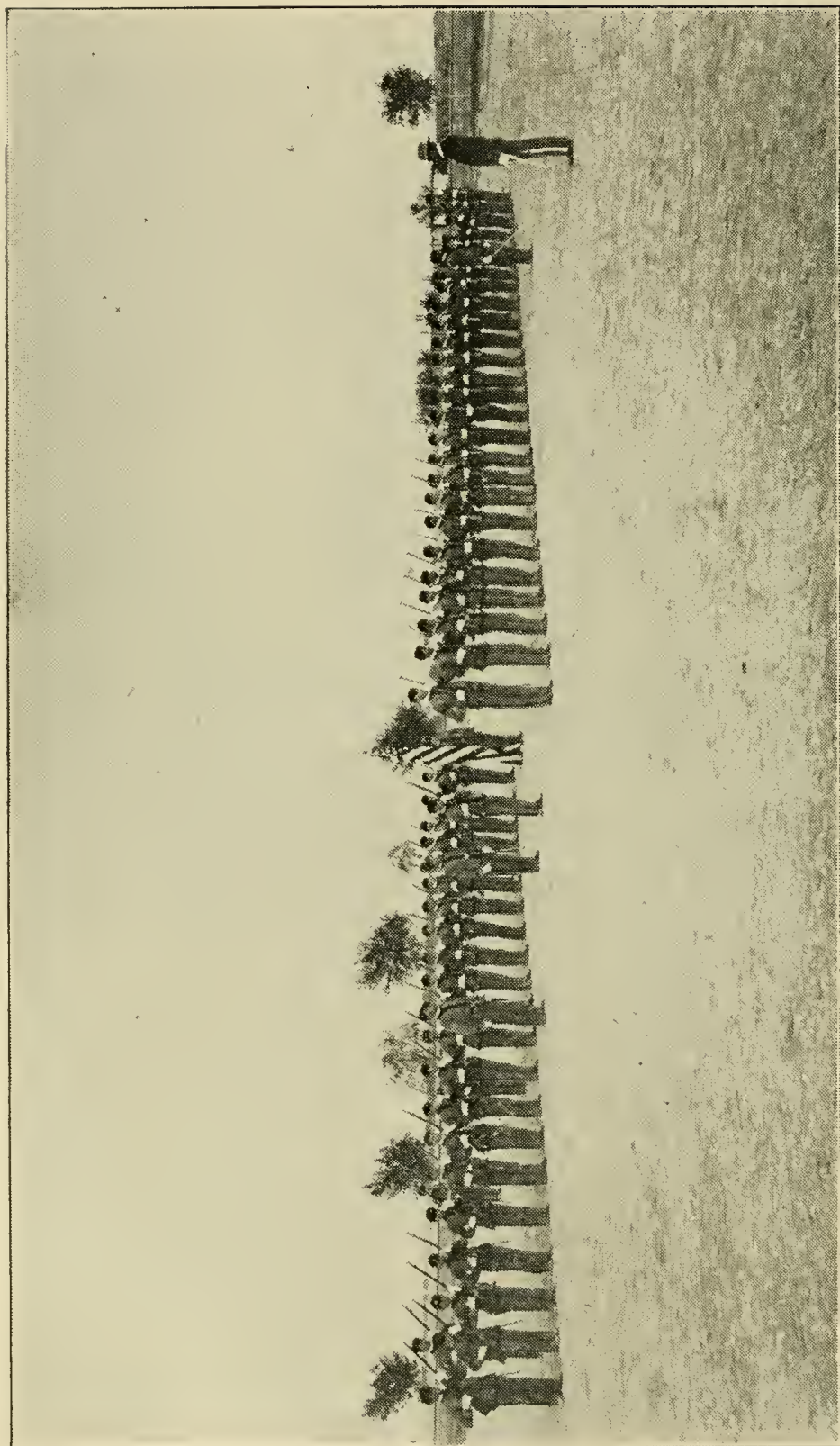
minating in the Franklin range. The third branch consists of the Magdalenas, the San Mateo mountains, the San Cristobal, the Caballos and the Black Range: while the most western fork consists of the Datils and the San Francisco, Tularosa and Mogollon ranges, extending into the Burro mountains in Grant county. Besides these there are many apparently independent mountain groups and ranges, such as the Floridas, the Cooks range, the Ladrones, the Peloncillo, the Pedernal hills, the Las Animas hills and others, whose geographical appellations are hardly of interest to the general reader.

Geology.

Geologically, these mountains, while part of one system, are not alike. The importance of being able to recognize the distinctions in their geological formations, is of great economic value.

From both a mining and a purely scientific viewpoint, the rocks of New Mexico are of exceptional interest. The wide range of geological formations represented, the large and diversified deposits of ores and other mineral values which these formations are known to contain, and the fact that the mineral wealth of the region has been exploited upon a small scale only, all go to make New Mexico a very interesting field to the mining engineer, the expert, the capitalist, the prospector and the miner.

The geological formations comprise five very marked classes of rock material. At the base is a great mass of crystallines, chiefly granites, gneisses and schists with some metamorphic clastics which cannot always be distinguished from the members of the fundamental complex. The latest Paleozoics are widely distributed and are chiefly known by the thick blue limestones which form the crests and back slopes of many of the principal mountain ranges: these are carboniferous. A third class of rocks is found in the thick and extensive beds of massive yellow sandstones, the geological age of which is Cretaceous. Over all these indurated rocks is a mantle of soft clays and sands, largely deposited during the Tertiary period. Later than all of these are vast outflows of igneous rocks, which cover many thousands of



CADETS OF THE NEW MEXICO MILITARY INSTITUTE AT ROSWELL.

square miles within the limits of New Mexico. The period during which these volcanic rocks were erupted extended from the late Tertiary down probably to within the time of the settlement of America by Europeans.

Only in the southern extremity of the Sangre de Cristo range is it thought that true Archaean rocks are exposed. Possibly, also some of the basement crystallines of the Mogollon and Burro mountains in western New Mexico, and in the Sierra de los Caballos, in south central New Mexico, may prove to be of Archaean age. Even in these localities, the areas, which may be properly referred to the Archaean, are quite limited in extent.

Most of the mountain ranges are great tilted blocks, having one long sloping side, and one steep face, originally a fault scarp. In the abruptly rising faces, considerable portion of the basal part is often found to be made up of quartz plates, micaceous and hornblendic schists, gneisses and granites. The foliation of these highly metamorphosed rocks is usually nearly vertical. When they meet the basal quartzites and limestones above, they are sharply beveled off and the stratification of the last named beds is nearly at right angles to the planes of lamination beneath.

These highly metamorphosed masses are here referred to the Algonkian age. They are more or less mineralized in the various mountain systems. They contain many of the extensive deposits of copper, iron, silver, gold and some of the rarer metals. These rocks are well displayed in the Sandia, Manzano, San Andreas, Magdalena, Caballos, Black Range, Sangre de Cristo, Sacramento and other ranges.

In central New Mexico, in the Sandia, Caballos, and San Andreas ranges, there is a massive quartzite, fifty to one hundred feet in thickness, the lower part of which is a conglomerate, lying between the carboniferous limestone and the metamorphics. It is conformable with the limestones immediately above it. This quartzite member reposes upon the upturned ages of the Algonkian formations, indicating clearly that an enormous erosion interval separates the two. In some mountain ranges this quartzite carries important copper deposits.

On the whole the carboniferous rocks of New Mexico are



FALLS OF THE NAMBE, NORTH OF SANTA FE.

very important formations. They are found in the majority of the principal mountain ranges. In most localities they are important ore carriers. As guide horizons they deserve the fullest consideration in the location of mines. Four important series of formations belonging to the carboniferous system have been clearly made out in New Mexico. They represent the lower carboniferous, the middle carboniferous, the upper carboniferous and Oklahoman series. The nether series of the carboniferous has been clearly differentiated in a number of localities. Principal of these places is Lake Valley, in Sierra county. In the Sacramento mountains the faunal equivalent of the Burlington limestone of the Mississippi Valley is well exposed.

The great limestone plates which cap the principal mountain ranges in central New Mexico, and which form their back slopes, are carboniferous in age. Immediately beneath the great limestone formations is found, usually a white quartzite, which often passes downward into a coarse conglomerate. The quartzite, with its coarse phase, rests unconformably on the upturned edges of the metamorphic series.

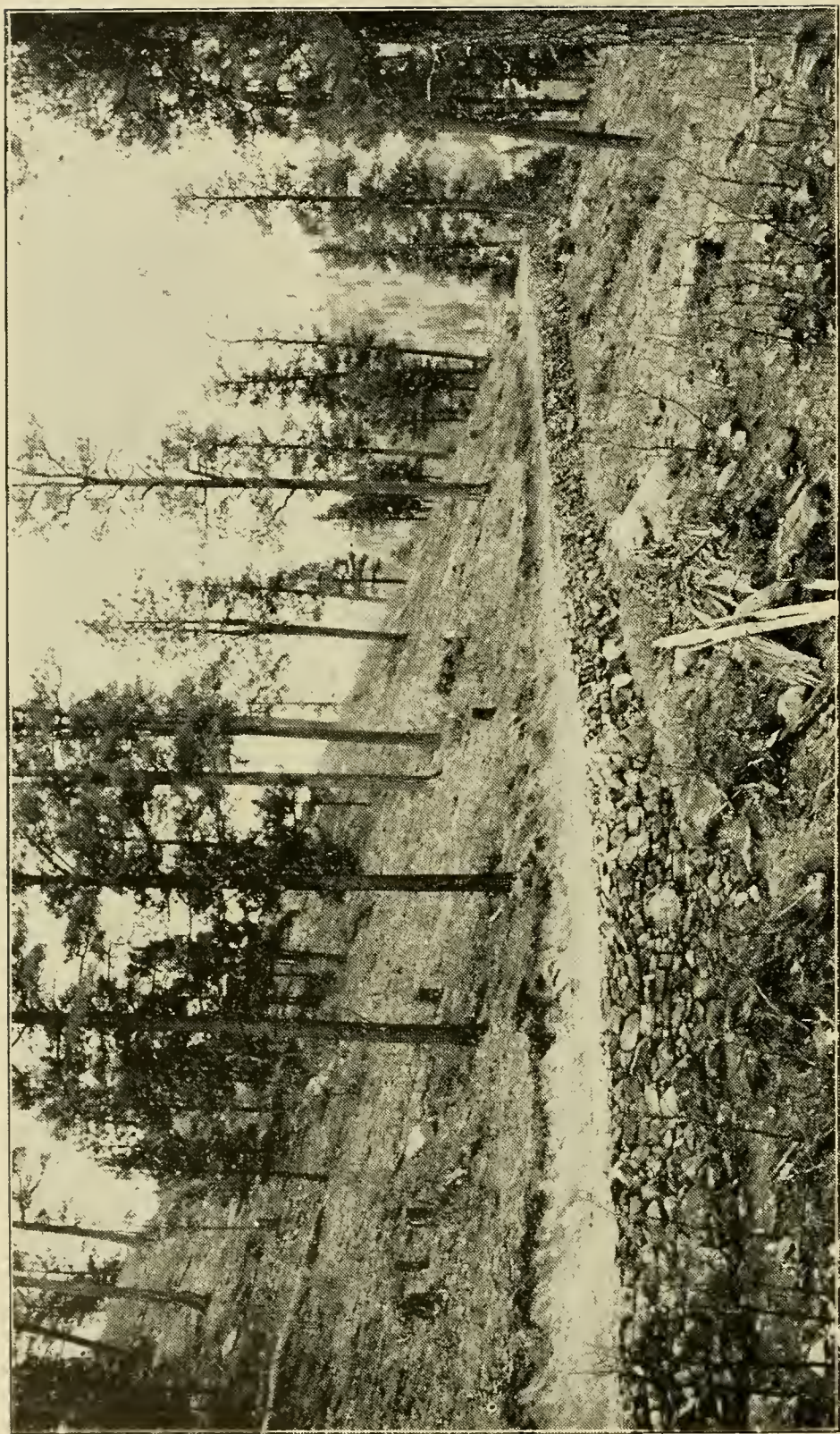
The great limestones are easily distinguishable by their black and blue to gray color, their peculiar compact texture, and the fossils which they contain. The thickness of the limestone is from 300 to probably 1,000 feet. It is massively bedded, and in some localities contains some very thick beds of pure whitish lime rock.

This great limestone formation forms a remarkable cornice on the Sandia mountains, clearly seen from the railroad station at Albuquerque. It is also an important part of the Manzano, Magdalena, Socorro, Caballos, Ladrones, San Andreas and Sacramento ranges.

In most of the districts the carboniferous limestone carries important lead and silver deposits. The quartzite also carries copper.

Above the blue limestones of the carboniferous comes in an important sandstone, and then a sequence of shales and sandstones conspicuous for their remarkable red coloration. "Red beds" they are generally called.

These Permo-carboniferous red beds are found everywhere at the foot of the back slope of the central New Mexico moun-



SCENIC "ROUTE" ROAD NEAR LAS VEGAS.

tain ranges. They are 200 to 1,000 feet thick and often form a conspicuous feature in the landscape.

In the Sandia mountains the lower sandstone is called the Coyote sandstone from Coyote Springs, and the upper member of the Bernalillo shales.

These red sandstones and shales are notable for the copper ores everywhere distributed through them.

There appears to be small doubt that the upper part of the great formation, long called the "red beds," belongs to a later geological age than the carboniferous. American geologists prefer to denominate the lower part of the Threefold Mesozoic the Jura-Trias.

In New Mexico these beds are largely developed in the northeastern part in the Cimarron, Canadian and Pecos Valleys, and in the central part in the Rio Grande Valley. In thickness the measurement is probably greatly in excess of 500 feet.

The important ore deposits are chiefly those of copper and iron. Gypsum, fire clays and cement materials abound.

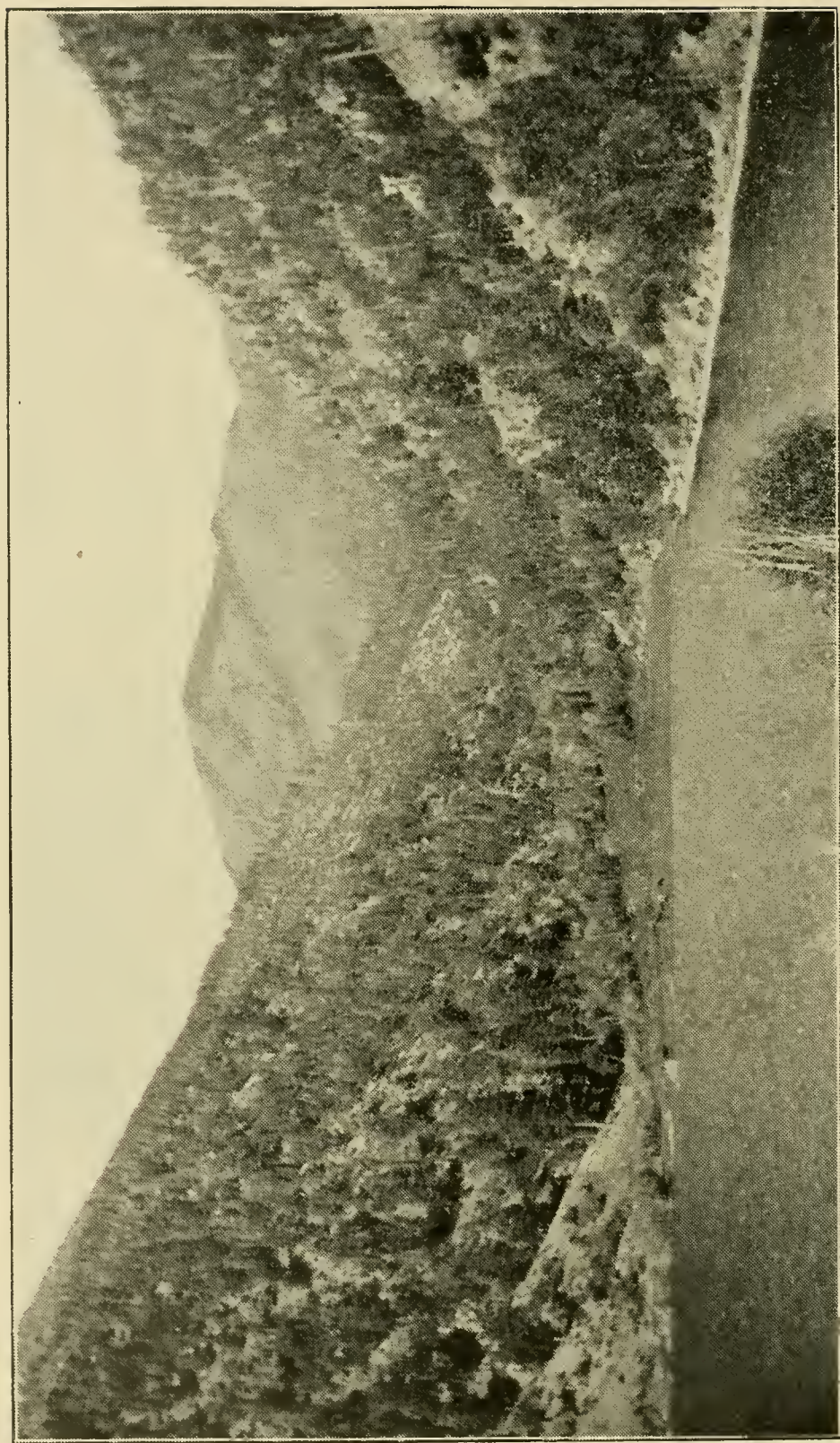
The cretaceous formations are the most extensive surface rocks in New Mexico. They probably cover more than one-half of the whole area. Both the upper and lower cretaceous sediments are well represented.

In the Canadian and Pecos Valleys, particularly around the western and northern borders of the Llano Estacado, there lies above the "red beds" a remarkable sequence of sands, chalky rocks and clays. These have been called the Trinity sands at the base, the Fredericksburg limestone, and the Washita sands.

At the base of the upper cretaceous is a thick sandstone at least 300 feet in thickness. This is one of the chief artesian well reservoirs.

In northeastern New Mexico particularly, the Colorado formation is well defined. It there attains a thickness of fully 800 feet. It comprises chiefly shales with numerous bands of limestone and several thick sandstones.

Attaining a development of 1,500 feet in northeastern New Mexico, the Montana is well represented by at least two important terranes, known further north as the Pierre shales and the Fox Hills sandstones. The shales are prevailingly



CABRESTO LAKE, TAOS COUNTY.

gray and drab, becoming yellowish above and blackish below.

Here the beds generally referred to the Laramie are upward of 2,000 feet in thickness. The rocks are chiefly gray sandstones and shales, with numerous beds of coal. Most of the coal of the region is believed to belong to the Laramie age. The coals of the Raton, Dawson, Cerrillos, Carthage and the Bear mountains are all regarded as Laramie coals.

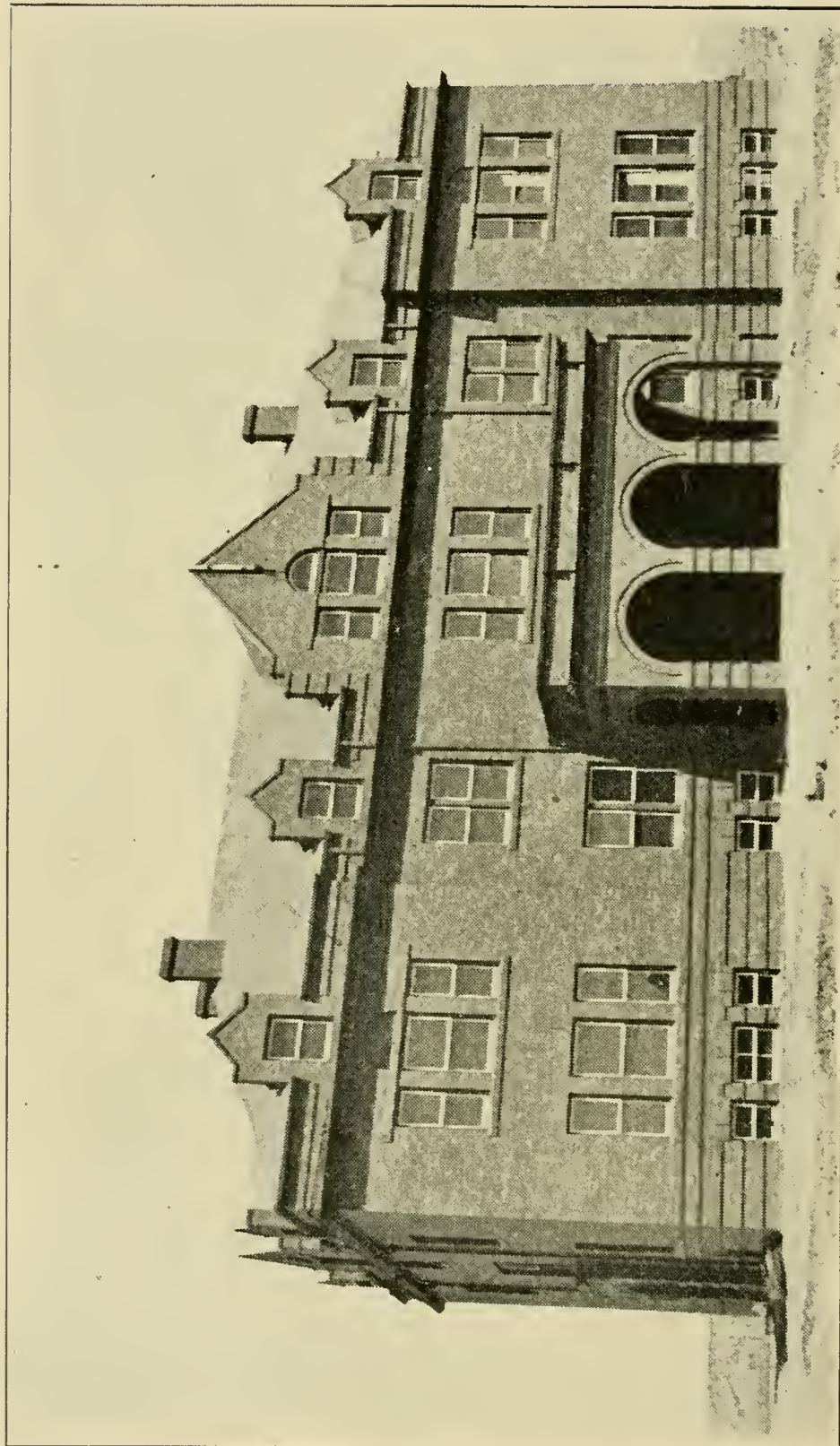
In northeastern New Mexico and in the Rio Grande Valley there are two large areas of gray shales which reach a maximum thickness of over 800 feet. They have been referred to the early Tertiary, and are called the Puerco series.

The later Tertiary beds are widely distributed. The Llano Estacado formation of eastern New Mexico, over 800 feet in thickness, appears to belong to this age. On Galisteo creek, south of Santa Fe, certain sands are referred to the Neocene, as are the Santa Fe marls so extensively developed north of the City of Santa Fe. The marls extend down the valley of the Rio Grande at least as far as Socorro.

New Mexico is pre-eminently a mountain country. Geologically its mountains are interesting on account of their valuable mineral deposits; topographically, on account of being the sources of the life giving rivers, without which the Territory would be a desert.

River Systems.

The Rio Grande, which bisects the Territory, with its tributaries, comprises the most important river system. It rises in Colorado and empties into the Gulf of Mexico, about 500 miles of its course being in New Mexico. In its valley and tributary valleys lives one-half of the population of the Territory, and with its tributaries it furnishes the irrigation water for one-half of the land under cultivation in New Mexico. During flood seasons, it carries an immense amount of water that spreads over the lowlands, but during the dry season, it dwindles into insignificance in many places, although a large volume of water flows under the sandy bed at all times. In the northern part of its course the river flows through precipitous canons, opening into the Espanola Valley, and then becomes contracted again in the White Rock canon. South of this, the valley grows wider and the stream more sluggish,



INSTITUTE FOR THE DEAF AND DUMB AT SANTA FE.

the banks being low or consisting of sand bluffs, excepting in lower Socorro county and in Sierra county, where the Elephant Buttes close in upon the stream, which for a short distance flows more rapidly again, but below the Buttes spreads out into the Mesilla Valley, one of the garden spots of the Territory. This river has been called the "Nile of New Mexico" and this name is truthful within certain limitations. Egypt without the Nile would be a desert, New Mexico without the Rio Grande would still be a rich and prosperous commonwealth, although its population would be only half of what it is today and instead of being, first of all an agricultural, it would be more a stock and mining country.

The Rio Grande has many tributaries, along which are situated some of the loveliest and most fertile valleys of the Territory. Commencing in the north, the most important are the Costilla, Cabresto, Taos, Embudo, Petaca, Chama, Santa Cruz, Pojoaque, Santa Fe, Jemez, Galisteo, Puerco and Salado rivers. South of the last named the Rio Grande is practically tributaryless for over a hundred miles, except during the spring months or after heavy rains.

Next to the Rio Grande, the largest river in the Territory is the Pecos. It rises in Mora county, on the Pecos River Forest Reserve, and flows southeasterly for over 400 miles through the Territory and finally enters the Rio Grande in Texas. Along its upper course it is a mountain stream but in Leonard Wood county it assumes the characteristics of the lower Rio Grande, a wide, shifting sandy bed, cutting through bluffs or spreading over lowlands, carrying an immense volume of water during floods, seeping into the ground along certain stretches during drouth, but always having a strong underflow. In Chaves and Eddy counties, the flow of the river is more permanent and of greater volume, but here, too, it fluctuates according to the season. The waters of the Pecos are more alkaline than those of the Rio Grande, especially from Santa Rosa south. The Pecos has a number of long tributaries but none of them carrying a great volume of water except after heavy rains or during the flood season.

The third great river system of the Territory is that of the Canadian, which drains the eastern slope of the main Rocky Mountain range as far south as the headwaters of the Pecos

river. Its principal tributaries, the Cimarron, the Vermejo, the Ocate and the Mora, carry a considerable amount of water, while there are a number of lesser tributaries, perennial in their flow in their upper courses. These streams have more or less the characteristics of mountain streams, with rock bottoms. Still, they have considerable underflow, and as the Canadian approaches the eastern boundary, its waters seep into the sandy bed and its tributaries are mere arroyos.

Next in importance to the Canadian, and exceeding it in volume of water, is the San Juan system in the northwestern part. The principal tributaries of this river in New Mexico are the Las Animas and the La Plata. The waters of the San Juan eventually find their way into the Colorado river and the Pacific ocean.

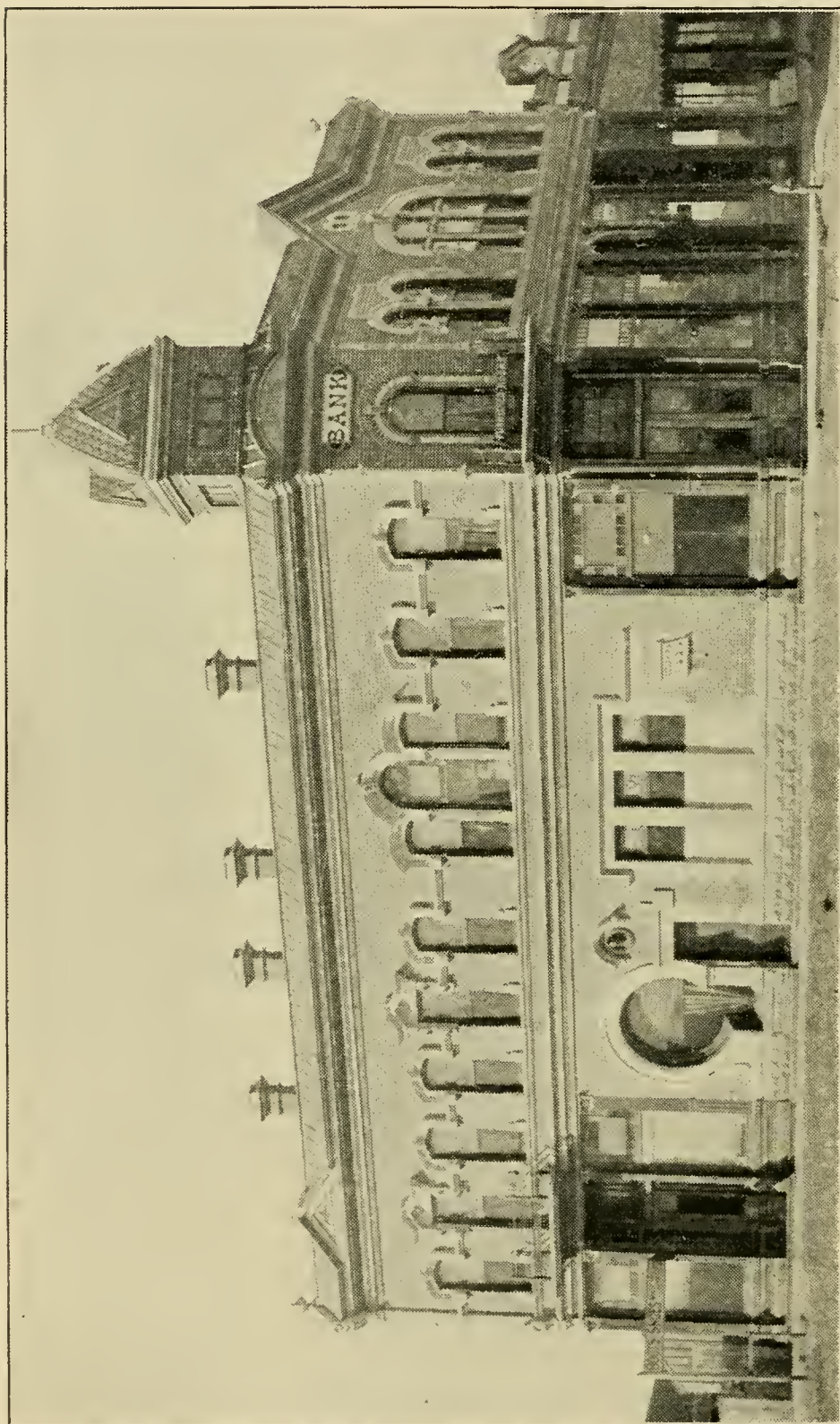
To the Pacific slope also belongs the Gila system in southwestern New Mexico. In addition there are a number of independent river courses, which do not make their way to the ocean, either directly or indirectly. The most important of these is the Mimbres, in the southern part of the Territory, which in its lower source has a strong underflow that is to be tapped in the near future to furnish the City of El Paso, in Texas, with water.

These rivers and streams are the arteries upon whose flow the very existence of the Territory depends. They differ in many respects from rivers in the east, owing to peculiarities of climate, of soil and the uses to which their waters are put. So called arroyos or dry water courses, furrow New Mexico in every direction, in addition to the rivers and streams. These arroyos carry water only after rains or when the snow is melting in the mountains. Most of them have an underflow but ordinarily they appear to the eye, as rivers that have been dried up by the sun and the winds.

Irrigation.

Excepting in a few mountain valleys and upon high mesas, irrigation is necessary to the successful pursuit of agriculture. Irrigation permits the application of water to crops when they need it.

That this is the ideal condition under which to raise crops goes without saying, and is proven by 5,000 years of history



BANK BUILDING AT DEMING.

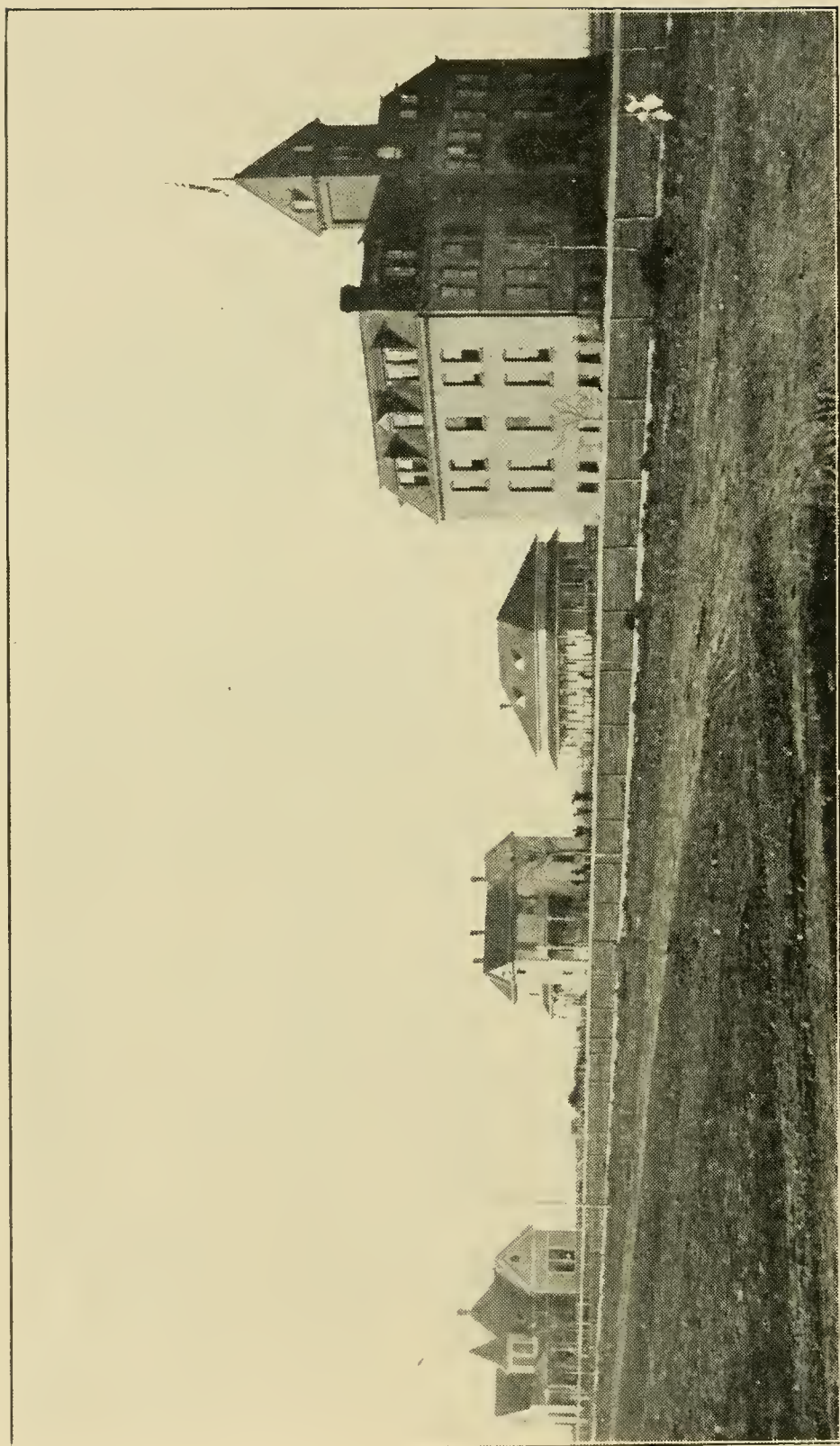
in Egypt, Italy, the East Indies and China. No excessive moisture, no drouth, worries the husbandman who possesses an irrigation right in a perennial stream or who has fortified himself with a reservoir. Irrigation means intensive farming, it means that the land will be fertilized at the same time that it is watered, it means certain crops and a maximum production per acre. In its perfection, agriculture by irrigation, is as distinct an advance upon the methods of agriculture in the more humid states, as manufacturing with machinery is over manual labor.

When it is remembered that out of a total area of over 78,000,000 acres only about a quarter million are in actual cultivation under irrigation ditches, then it will be seen that there is a vast opening for enterprise in reclaiming broad areas of as fertile lands as God ever created, lying under a perfect sky, and in a well nigh perfect climate. Nor is there a lack of water for reclaiming at least a portion of the vast arid domain. The flood waters which flow to waste annually, the ordinary flow of rivers and streams that is wasted or not utilized, the tremendous underflow in most of the broad valleys of the Territory, the feasibility and cheapness of pumping water from unfailing wells in many sections, and the undoubted existence of large artesian belts, all promise that sooner or later a large part of New Mexico will be under successful irrigation.

Sufficient data have been gathered and published in the report of the Territorial commission of irrigation in 1898 and by the United States geological survey to make it quite practical to pick out the most available reservoir sites and to determine upon projects, which at a minimum cost would benefit the greatest number of people.

The Territory may properly be divided into three distinct regions, the eastern plains, the Rio Grande Valley and the western plateaus. The eastern portion is an extension of the high plains of Texas, broken by the waters of the Canadian and Pecos rivers. This broad stretch of open grazing land continues to the uplands which form the southern extension of the Rocky Mountains of Colorado.

This portion is a favored section for the cattle growers and sheep raisers. Beyond this broken country is the Rio Grande



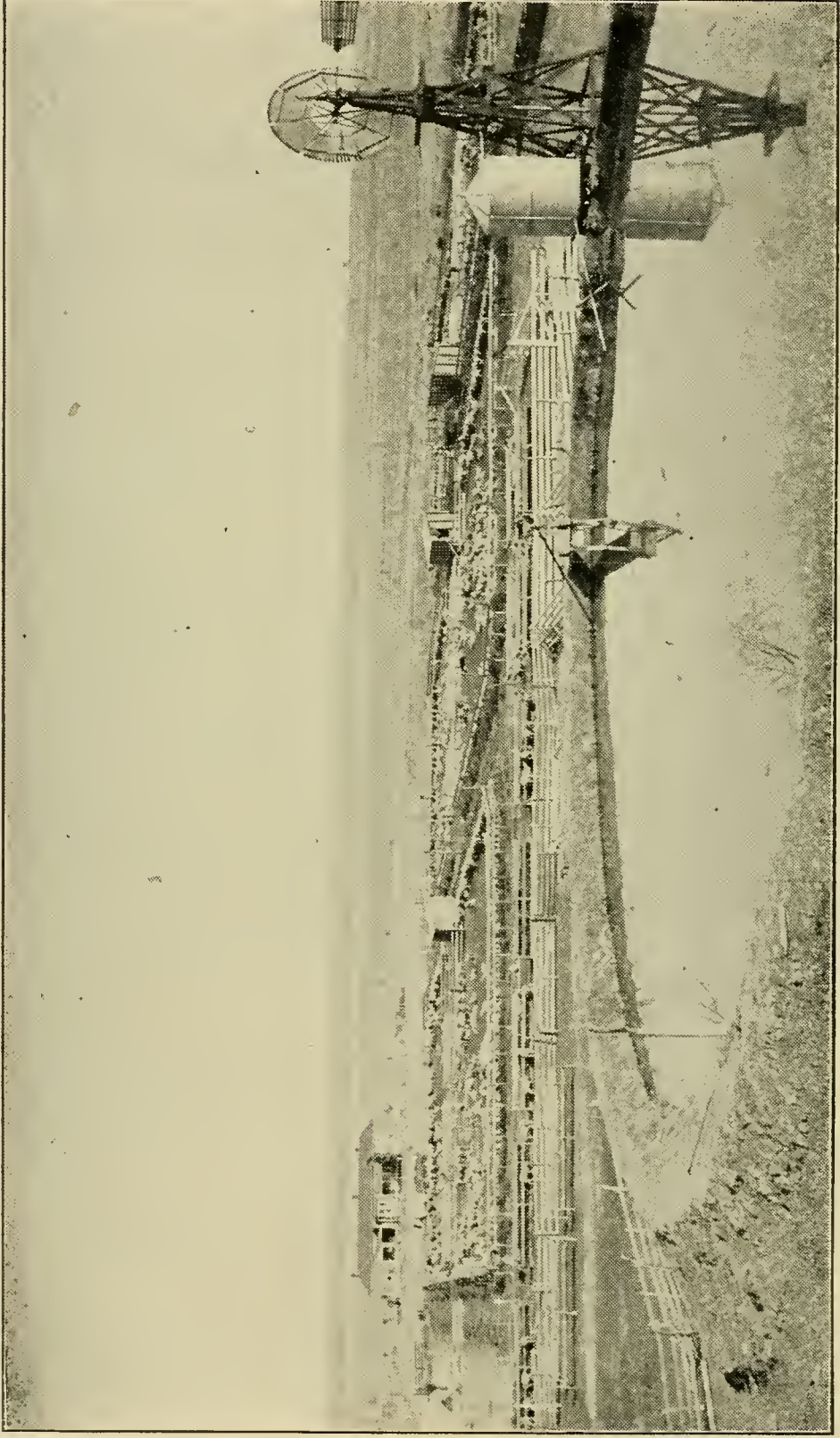
NEW MEXICO MILITARY INSTITUTE AT ROSWELL.

valley, and still further west are elevated arid table lands. These extend to the mountains, which lie about the headwaters of the Gila and Salt rivers. In the extreme northwestern part of the Territory, where are the fertile valleys of the San Juan river and its tributaries, there has been recently a considerable development of irrigation.

In the Rio Grande section there are a few very large irrigation canals and many small community ditches held by the Indians and small settlers. The origin of these ditches is lost, even in local tradition, and it is probable that many more of them were in use before the advent of the Spaniards. Under the community system each ditch is held and controlled by the owners of the land it irrigates, these living usually together in a village or pueblo. In the fall of each year a *mayordomo* is elected, who has full control of the ditch for the following season. He assesses the land for the labor necessary to clean the ditch and to keep it in repair during the irrigation season, apportions the water to each consumer according to the local conditions, and in general supervises all matters pertaining to irrigation. While the apportionment of labor varies, it is generally such that a farmer holding a tract of six acres is required to furnish the labor of one man in cleaning and repairing the entire ditch in the spring, while he who holds twelve acres furnishes a man's labor when necessary during the whole season. The ditches have no regular gates or sluices, and flooding is the only means of irrigation. Consequently, the use of water is extremely wasteful.

The development of the agricultural resources depends largely upon the control of the Rio Grande. The seepage and inflow from streams maintain the river at a good volume in northern New Mexico. Sites suitable for reservoirs along the Rio Grande and its principal tributaries are frequent, and several of them excellent. Large dams constructed at these points would render it possible to hold large quantities of water for the irrigation of a number of open valleys along the course of the river. Some of these reservoir sites have been surveyed.

Irrigation on the eastern plain is of comparatively recent introduction. The water supply is drawn from the Canadian and Pecos rivers. The Canadian river flows through a valley

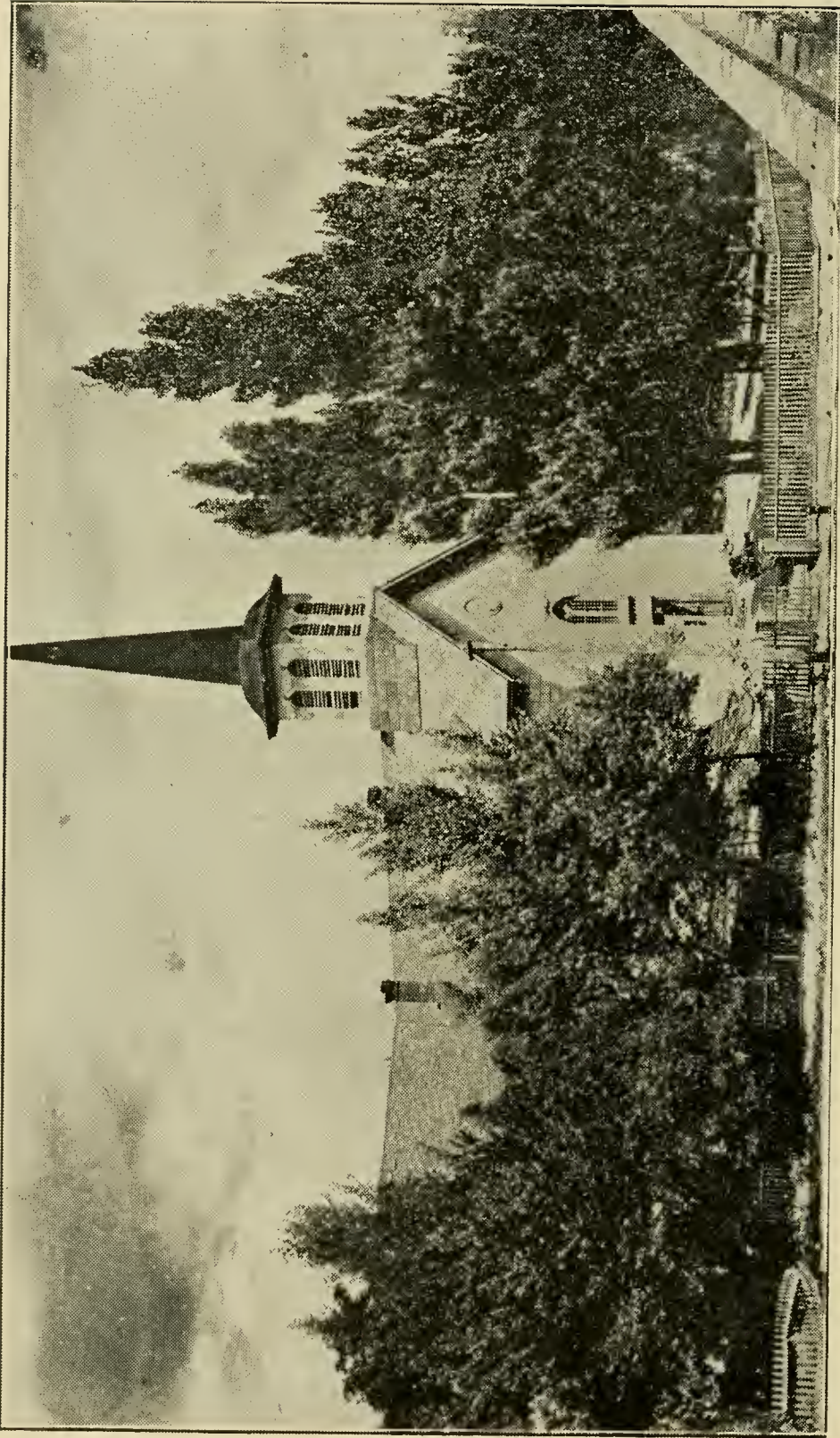


THE WEBSTER RANCH IN EDDY COUNTY.

200 miles in length within the Territory. Irrigation ditches in this drainage basin are confined almost wholly to the tributaries, the course of the main stream being for the most part through a canon, from which it does not emerge until it nears the boundary. Important irrigation systems are supplied by the Cimarron, Vermejo, Mora and Conchas rivers, those of the two first mentioned streams being among the most extensive in the Territory. Two large canals, constructed by a corporation, are located on the Maxwell grant, a tract containing 1,491,755 acres of grazing, agricultural, timber and mineral lands, including within its boundaries the headwaters of the Canadian, Vermejo and Cimarron rivers. Along the line of these canals is a series of natural basins or ancient lake-beds, favorably situated, in which large quantities of water are stored. Many smaller natural reservoir sites, located at elevations where evaporation is comparatively slight, are found near the headwaters of nearly all the streams which originate in this basin. Eleven reservoirs, with a combined capacity of 5,000 acre feet, have been constructed on the Vermejo. On the Cimarron there are thirteen individual ditches and one corporation ditch. Connected with these are four storage reservoirs, with an aggregate capacity of 6,000 acre feet. The area irrigated by the ditches of this stream is 7,628 acres. The Mora river and its tributaries supply water for practically all the irrigation systems in Mora county. Two ditches have been constructed, by which, during the periods of greater scarcity, water is taken from the Rio del Pueblo in Taos county and diverted through passes in the mountains. All the ditches along the Mora and its tributaries are either private or community ditches.

The Pecos river becomes a considerable stream at its confluence with the Gallinas. As the river has mountain sources, the flow in the upper portion of its basin is perennial; but shortly after it emerges from the highlands much of its water is lost by seepage and for several months in the year this part of the river bed carries very little water.

In the lower part of its course in New Mexico the Pecos receives large quantities of water from numerous springs, which are a notable feature, many of them emerging from the earth with such volume and force as to prove beyond question



GUADALUPE CHURCH AT SANTA FE.

that they come from the drainage waters of the high precipitous mountain ranges on the west.

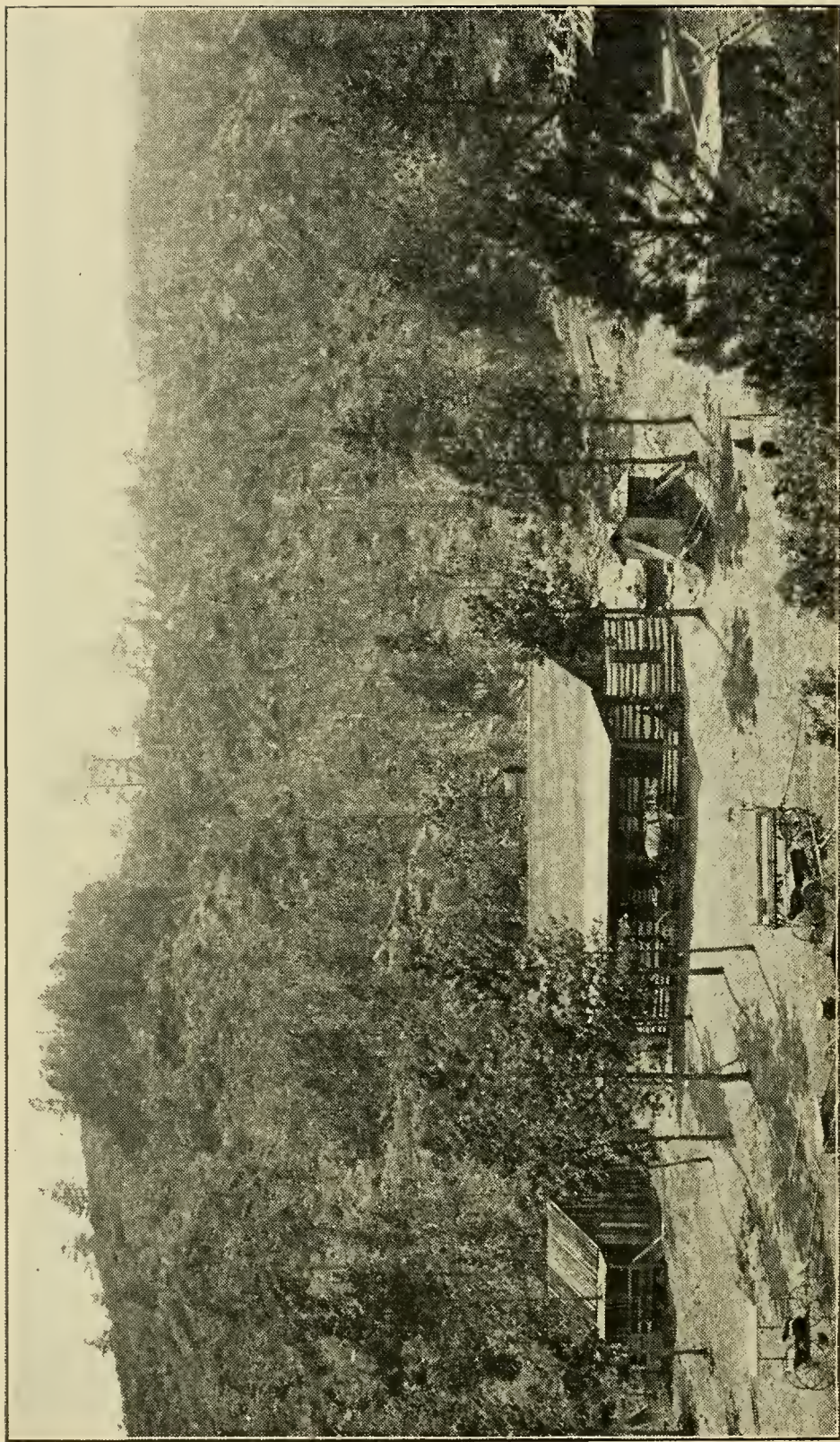
The following are the principal tributaries of the Pecos, several of them furnishing a constant supply: Mora, Agua Negra, Agua Negra Chiquita, Rio Hondo, Berendo rivers (north, middle and south), the Spring rivers (north and south), Penasco, Seven rivers, Rocky Arroyo and Black river. The drainage area of the catchment basin of the Pecos river lying within the Territory and available for irrigation purposes is estimated at 20,000 square miles. *It extends along four degrees of latitude, with varying altitudes of from 3,000 to 11,000 feet. In the valley between Roswell and the territorial line, many of the lands subject to irrigation are of excellent quality.

In the western plateau region the total number of acres irrigated is small compared with the other two main divisions of the Territory. The waters affording supply for this region are the San Juan, the Gila, the Zuni and the Mimbres rivers. The lands irrigated by the San Juan river are in the northern part of San Juan county. The sources of this river are in the San Juan and La Plata mountains in Colorado, and the affluents which it receives from the south are unimportant. Near the Colorado line the San Juan has a mean flow of 960 cubic feet per second. This is augmented by the waters of the Rio de los Pinos, which has an estimated flow of eighty cubic feet per second. The most important tributary is the Las Animas, which has a normal flow at a point below Aztec of 855 cubic feet per second.

While the flow of all these streams is perennial, it fluctuates with the seasons, being increased by the melting snows in the spring, and later by the rains which usually occur in the latter part of July and in August.

In the drainage basin of the San Juan there are fifty-two ditches, located as follows: On the Las Animas twenty ditches irrigating 7,132 acres; on the San Juan nineteen, irrigating 3,999 acres; and on the La Plata fifteen, irrigating 3,063. The total area irrigated by the San Juan and its tributaries is 14,734 acres.

The Gila river rises in the Black and Mimbres ranges and in Grant county flows for the most part through narrow



A HOMESTEAD IN COLFAX COUNTY.

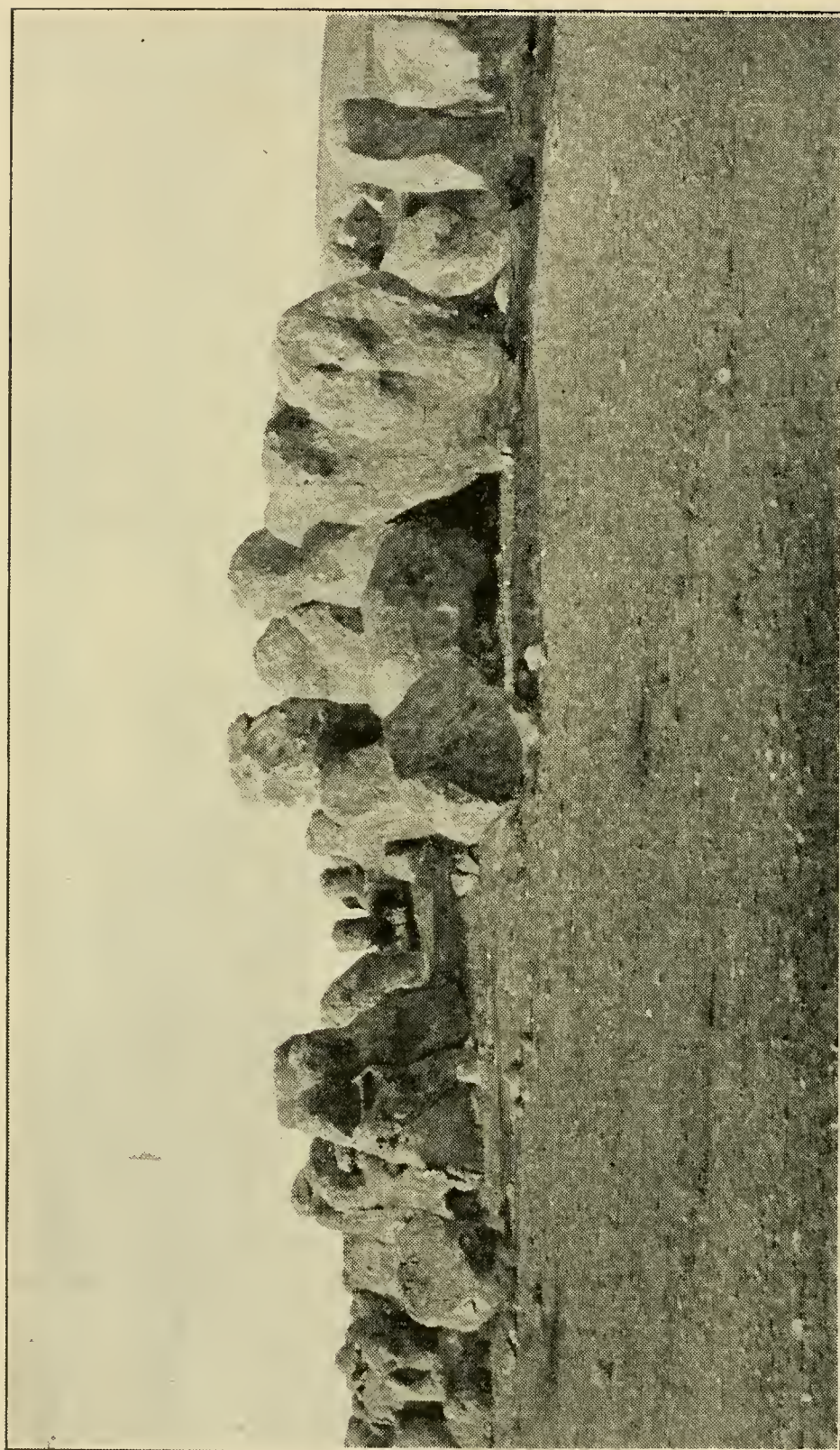
mountain valleys. The total acreage irrigated by it is 5,933 acres. The flow is permanent and only a small portion is used. In Grant county a considerable acreage is irrigated by the Rio Mimbres. This stream flows southward through the county to within a few miles of Deming, then turns abruptly to the east and discharges its waters upon the Florida plains, where they are lost in the sands.

Between the basins of the Gila and the San Juan rivers, there is a small area drained by the Zuni river. Portions of this area are irrigated by the Zuni Indians. The government is constructing a reservoir for the Pueblo Indians on the Zuni reservation which will impound sufficient water to irrigate 6,000 acres.

Of the 78,374,000 acres of land surface in New Mexico, only 6,000,000 or 6.5 per cent. are included in farms and only 400,000 are improved. Of the improved land 385,000 acres are located outside of the Indian reservations. The importance of irrigation is demonstrated by the fact that the irrigated area outside of the Indian reservations is only a little more than 250,000 acres. In 1889 the corresponding irrigated area was but 91,755 acres.

Of the farms of the Territory 72.2 per cent. are wholly or partially irrigated, while of the improved acreage 57.2 per cent. are irrigated. The average area of improved land in such irrigated farms is thirty-three acres, of which twenty-six are irrigated.

The average number of acres of irrigated land for each mile of ditch reported is eighty-six. The area under ditch for each mile is 272 acres, or over three times the average irrigated area. In many states where there is a larger percentage of new irrigation enterprises than in this Territory the area irrigated bears a much smaller ratio to the area under ditch. In the sections of New Mexico where irrigation has been practiced for centuries the effect on the old canals of the diversion of water at points farther up the stream is shown by the difference between acreage under ditch and acreage actually irrigated. This is especially evident along the Rio Grande. On the other hand, in the valleys of the Pecos and San Juan rivers and their tributaries, the difference is due to the presence of new enterprises.



CITY OF ROCKS, NEAR SILVER CITY.

The average cost of constructing the ditches is \$1,738 per mile and \$6.40 per acre of land under ditch.

Of the 12,311 farms, excluding those in the Indian reservations, 9,128 are irrigated and 3,183 are unirrigated. The acres in the irrigated farms number 2,892,855; in the unirrigated, 238,023. Live stock on the irrigated farms has a value of \$15,785,760, and on the unirrigated, \$15,941,640. Irrigated farms are, in number 74 per cent. of the total in the Territory; in acreage 56.4; in value of land and improvements, exclusive of buildings, 77.8; in implements and machinery, 75.9; in live stock 49.7; and in total farm wealth, 64.5 per cent.

The average size of all farms, exclusive of those held by Indians, is 464 acres, and that of irrigated farms, 380 acres. The irrigated farms make greater use of the public domain for grazing purposes than do those which are unirrigated, and an income is thus secured in addition to that obtained directly from the land owned and leased.

Sufficient has been done in irrigation to demonstrate what might be and eventually will be accomplished. The irrigation works in the lower Pecos Valley are the greatest and best in the United States. They have placed under ditch an area equal to the entire number of acres now under cultivation in the Territory; they have built cities and villages, turned a desert into a garden and created millions of dollars of wealth where formerly there was but an unproductive waste. And yet, this is only the beginning, even for this section of the Territory. Here, on the Rio Hondo, the United States government is about to build a \$350,000 reservoir and irrigation works.

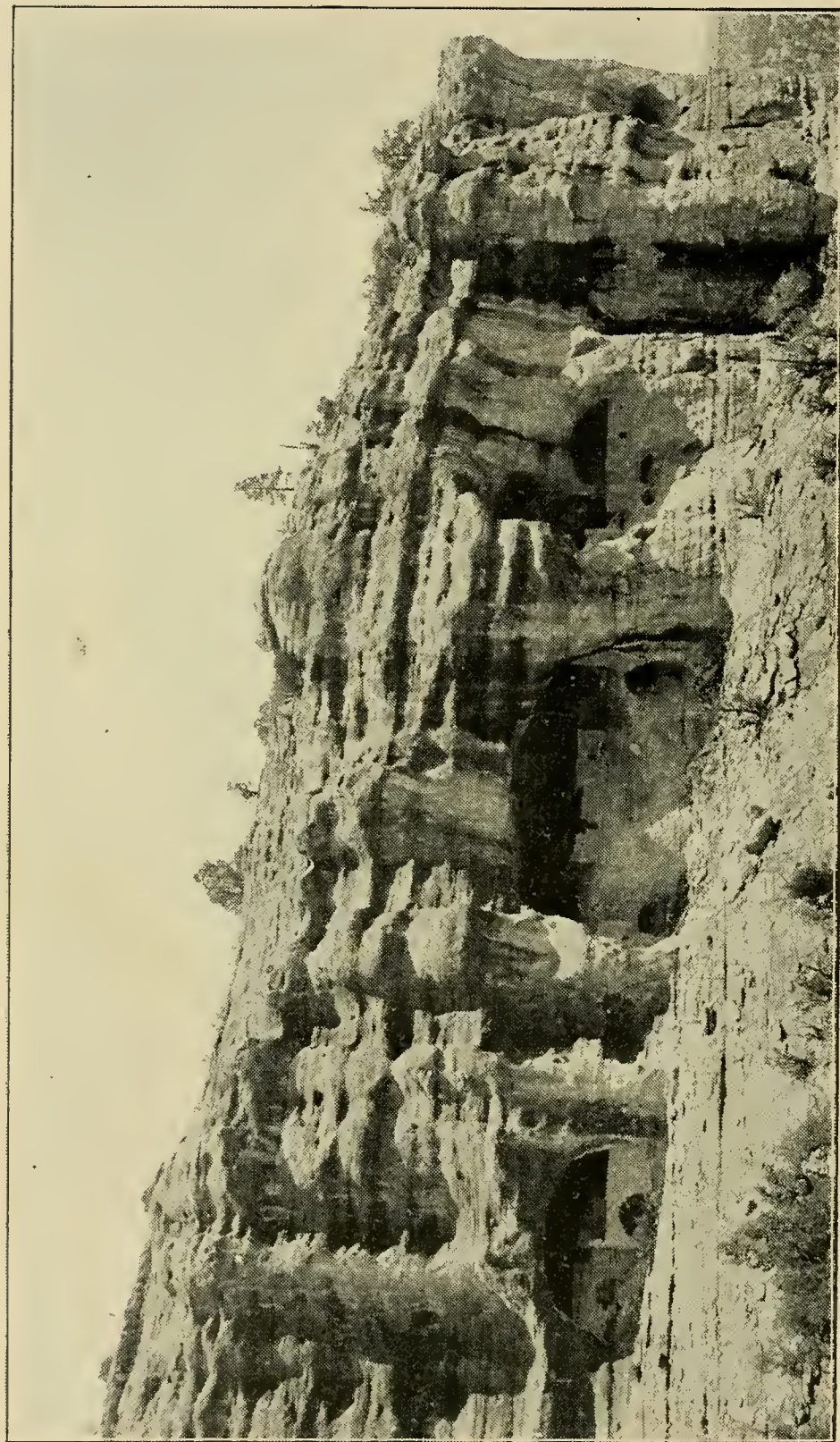
On the Maxwell land grant in Colfax county, equal progress has been made in building irrigation works on scientific principles, and the results are similar to those achieved in the Pecos Valley. In San Juan county there are miles upon miles of irrigation canals while many more miles are being added without exhausting the available water supply. For the Pueblo, as well as the Navajo Indians, the national government is constructing such reservoirs and irrigation canals; and it will undertake the same work in the near future for the white settlers. In the Rio Grande Valley and the valleys of its tributaries and along every brook and river are irrigation sys-



THE RIO GRANDE, NEAR EMBUDO, TAOS COUNTY.

tems, some of them primitive and wasteful, it is true, and sooner or later to be supplanted by scientific irrigation, yet, sufficient to demonstrate that New Mexico is first of all an agricultural commonwealth. It was the first to practice irrigation and will be the greatest beneficiary eventually under the reclamation policy so recently inaugurated by the national government.

But New Mexico does not depend altogether upon water from flowing streams or stored flood waters for the moisture to raise its crops. Besides a number of valleys and mesas where the rainfall is sufficient to raise crops, there are extensive artesian areas, developed to their greatest extent in Chaves and Eddy counties where there are scores of flowing wells, but existing also in Colfax county and about to be developed in other sections. Besides flowing wells, there are inexhaustible wells in which the water does not rise quite to the surface, such as have given Deming the name of the Windmill City. Then there is a great underground flow in nearly every river valley, which is available by pumping. Experiments successfully conducted at the Agricultural Experiment Station at Mesilla Park, have demonstrated that water sufficient for irrigation purposes can be raised with a gasoline pump at a maximum cost of from fifty-one to fifty-four cents an acre, the well being forty-eight feet deep. When it is considered that in India 6,000,000 acres are irrigated from wells by pumping, it can be seen what a future there is for New Mexico in agricultural development alone.



CLIFF DWELLINGS IN CHACO CANON, SAN JUAN COUNTY.

CHAPTER IV.

INDUSTRIES.

Agriculture.

THE up-to-date New Mexico farmer is the aristocrat of his craft. With twenty or thirty acres of fertile land and ample irrigation rights he is independent. He fears neither excessive moisture nor drouth, neither hard times nor panics. There is always a good market in which his products command top prices and as to crop failure, it is out of the question, if he knows his business.

New Mexico is attracting more attention today than at any former time on account of its agricultural possibilities. Home-seekers are coming to the Territory in great numbers, taking up and purchasing large areas of land in valleys, and building new agricultural communities of considerable importance.

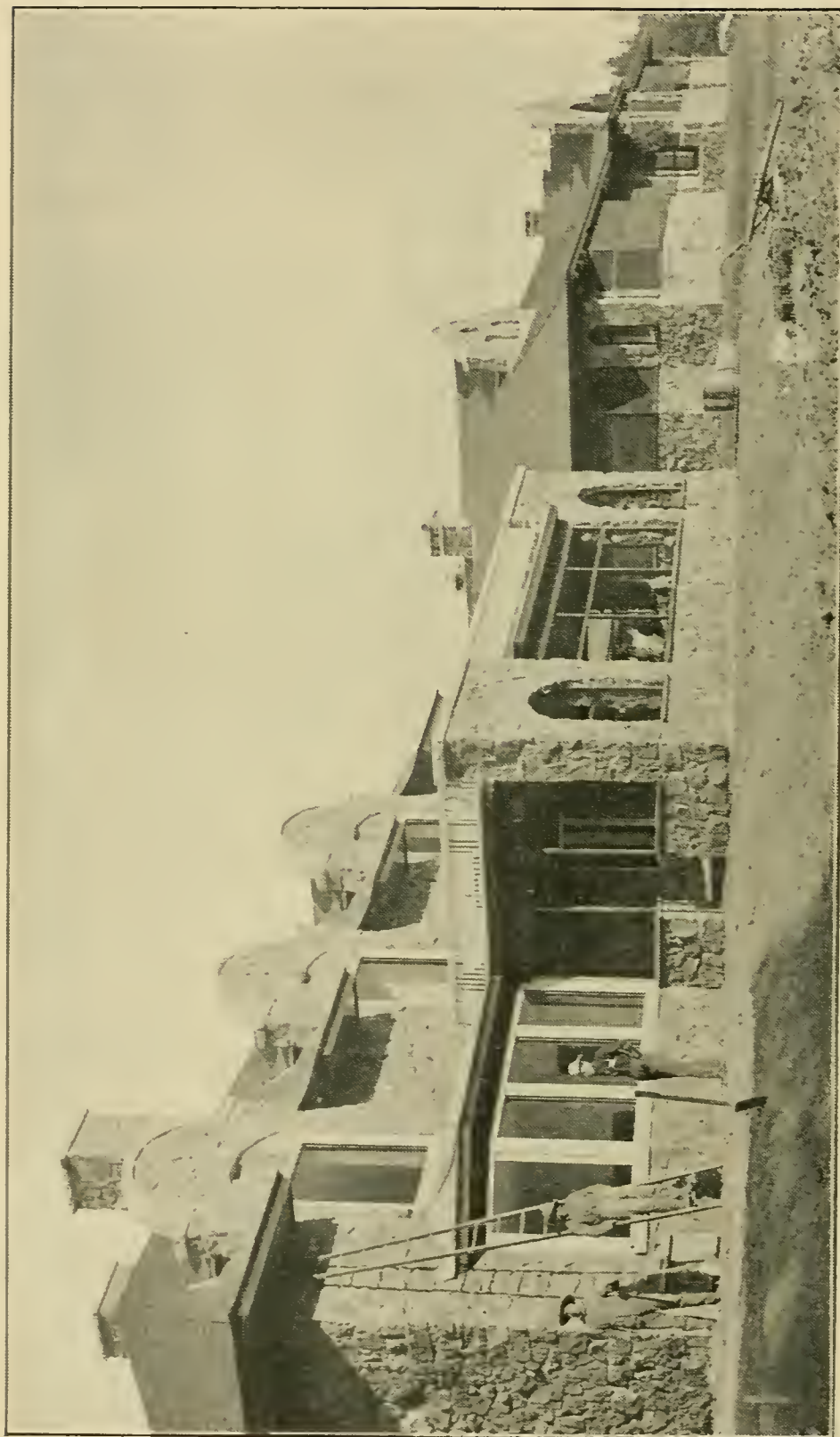
Forty-one per cent of the people in the Territory pursuing gainful occupations are engaged in agricultural pursuits—quite a creditable showing. In the great agricultural state of Illinois, having a population of 2,804,040 engaged in gainful occupations, there are 862,781 persons, or only thirty-one per cent., as against forty-one per cent. in New Mexico, who are engaged in agricultural pursuits.

The area and valuation of farm lands and the value of farm property in New Mexico has materially increased since 1890, as is shown in the following table:

	1890	1900
	a	b
Total number of farms.....	4,458	11,834
Acres in farms.....	782,882	5,130,878
Total value of farm property.....	\$33,543,141	\$53,737,824
Lands, fences and buildings.....	8,140,800	20,888,814
Implements and machinery.....	291,140	1,151,610
Live stock on hand June 1.....	25,111,202	31,727,400

a. Not less than three acres, reporting not less than \$500 gross income.

b. Not less than three acres, and reporting the sale of not less than \$500 in produce.



THE BARTLETT RANCH HOME, COLFAX COUNTY.

This shows that from 1890 to 1900 the number of farms increased 165 per cent., the area of farm lands 550 per cent., the total value of farm property 60 per cent., the value of lands with their improvements 156 per cent., the value of implements and machinery 295 per cent., and the value of live stock 26 per cent. These figures give an idea of the rapid development, and they are also indicative of what may be expected in the future. Another matter that is well worthy of record here is the fact that the producing capabilities per capita of those engaged in agricultural pursuits have increased amazingly. The annual value of farm products increased in the ten years, 1890 to 1900, from nearly \$2,000,000 to a little over \$10,000,000, or an increase of 400 per cent in the ten years, while the agricultural population has not increased 100 per cent.

The following table taken from the twelfth United States census will give some idea of the importance of several of the leading New Mexico crops during the census year of 1900:

	Value	Acres	Bushels
Total cereals.....	\$1,077,377	96,210	————
Corn	519,936	41,345	677,305
Wheat.....	390,616	37,907	603,303
Oats.....	154,347	15,848	342,777
Barley.....	12,475	1,110	23,107
Hay and forage.....	1,427,317	87,458	————
Beans	73,001	3,349	————
Peas... ..	20,365	2,220	————
Sugar beets	16,859	1,298	————
Irish potatoes.....	49,552	1,122	72,613
Sweet potatoes.....	4,588	47	6,180
Orchard products	197,331	———	————
Flowers and plants.....	5,300	11	————
Nurseries.....	4,343	22	————
Vegetables.....	278,413	6,501	————
Not classified	33,717	———	————

Alfalfa.

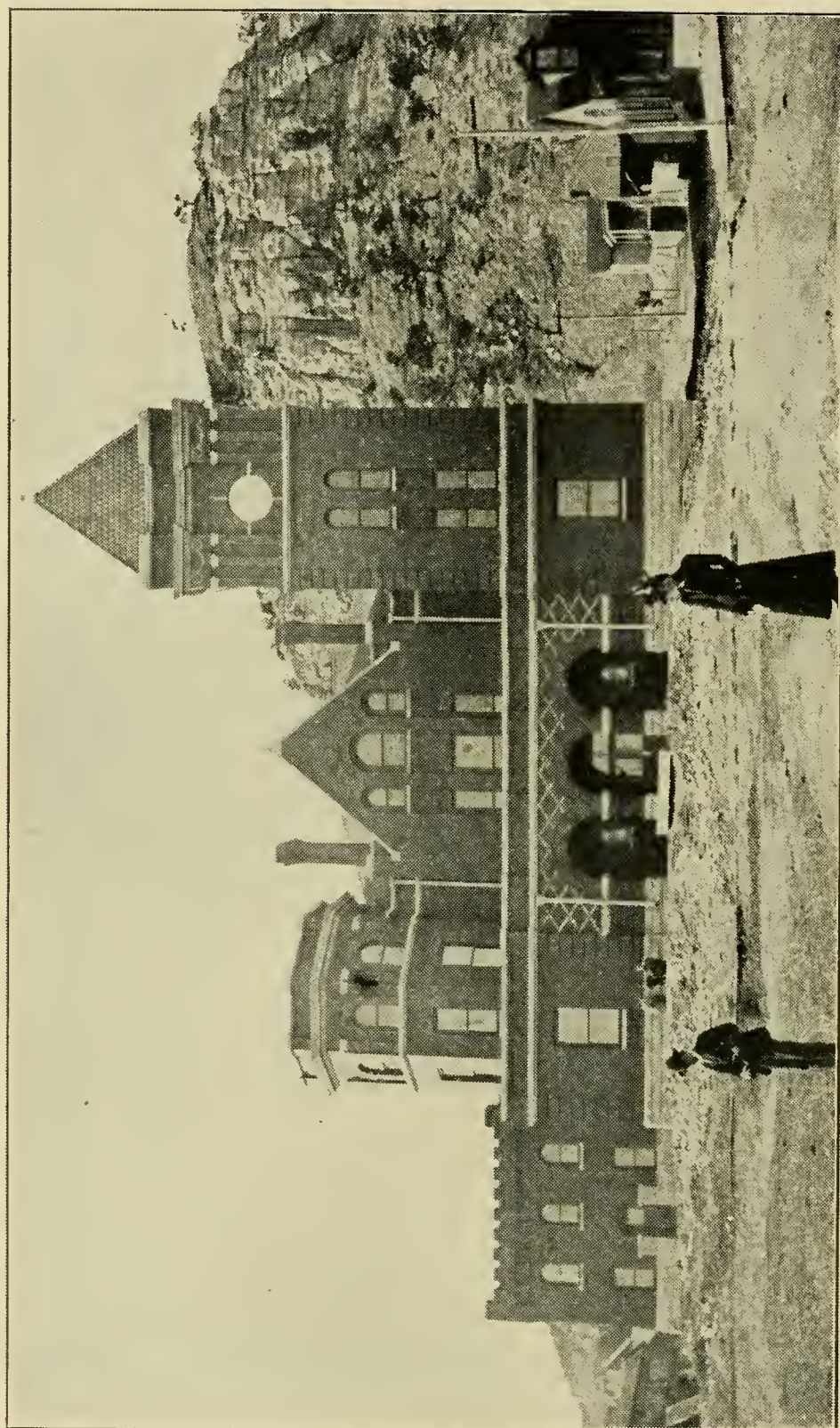
Much has been written about alfalfa. It is known more or less in every state in the Union. Alfalfa is grown in all the irri-



MONUMENT ROCK, PECOS FOREST RESERVE.

gated sections of New Mexico up to an altitude of 8,000 feet. It is grown considerably in dry farming sections where there is no irrigation. In New Mexico alfalfa does well in almost every class of soil. The chemical constituents of the soil seem to have little to do with the growth of the crop, provided the surface is level and the proper amount of water is given. It grows well on light, sandy loam, as well as on the heaviest adobe. It is said by an able writer that alfalfa will not stand "wet feet." That is true if he means that it would not grow in a water-logged soil. Where the soil is well drained it will extend its roots to the water table and grow luxuriantly where the water table is only a few feet below the surface of the ground. The area of alfalfa in New Mexico increased from 12,139 acres in 1890 to 55,467 in 1900. The average annual yield in the Territory is about three tons per acre. The cost of production, including taxes, water rent, growing, harvesting, baling and placing on board the car, does not exceed \$4 per ton. There are some large alfalfa farmers who are able to place alfalfa on the car at a much less figure because they have perfected their system of irrigation and handle the hay with improved machinery.

The net profit in growing alfalfa under irrigation is considerably larger than the average net profits realized on wheat and corn in the older agricultural sections. It is a crop that requires little labor, if the field has been made level and the soil well prepared before seeding, after which the operations are simple, resolving themselves into irrigation and harvesting. On many soils, one irrigation will produce one crop, which may vary from one-half to two and one-half tons per acre. The price of alfalfa varies in different parts of the Territory, depending upon the production, amount consumed by stock being fattened, and the shipping facilities. The demand for alfalfa, aside from that of local consumption, comes from cities and towns, mining and railroad camps, and the thousands of isolated stock ranches scattered over the arid and semi-arid sections, as well as a considerable demand from portions of Texas and the Republic of Mexico. At harvest time the price of alfalfa is comparatively low, usually not exceeding \$8 per ton, but the forehanded farmer who holds his product until winter, usually gets from \$10 to \$13 per ton. Alfalfa farming



COURT HOUSE, COLFAX COUNTY, AT RATON.

has proven very attractive and profitable, and it is not surprising that the area increased from 12,000 to 55,000 acres in ten years.

As to the feeding value of alfalfa it is conceded throughout the country that it leads all other forage crops in its total digestible food constituents and nitrogen contents.

Corn.

Corn stands next to alfalfa in acreage and value of total product. Where water for irrigation is plentiful the yield of corn in New Mexico compares favorably with the yield of this crop in the corn belt.

Kaffir corn grows as well if not better than ordinary corn. In some sections of the Territory it is grown almost exclusively for feeding stock. In the Pecos valley, Kaffir corn is one of the leading crops. It yields from twenty-five to fifty bushels per acre, besides producing a large quantity of excellent stover. Both the grain and stover are fed to cattle and sheep in the fattening pens. Kaffir corn is an excellent drouth resister.

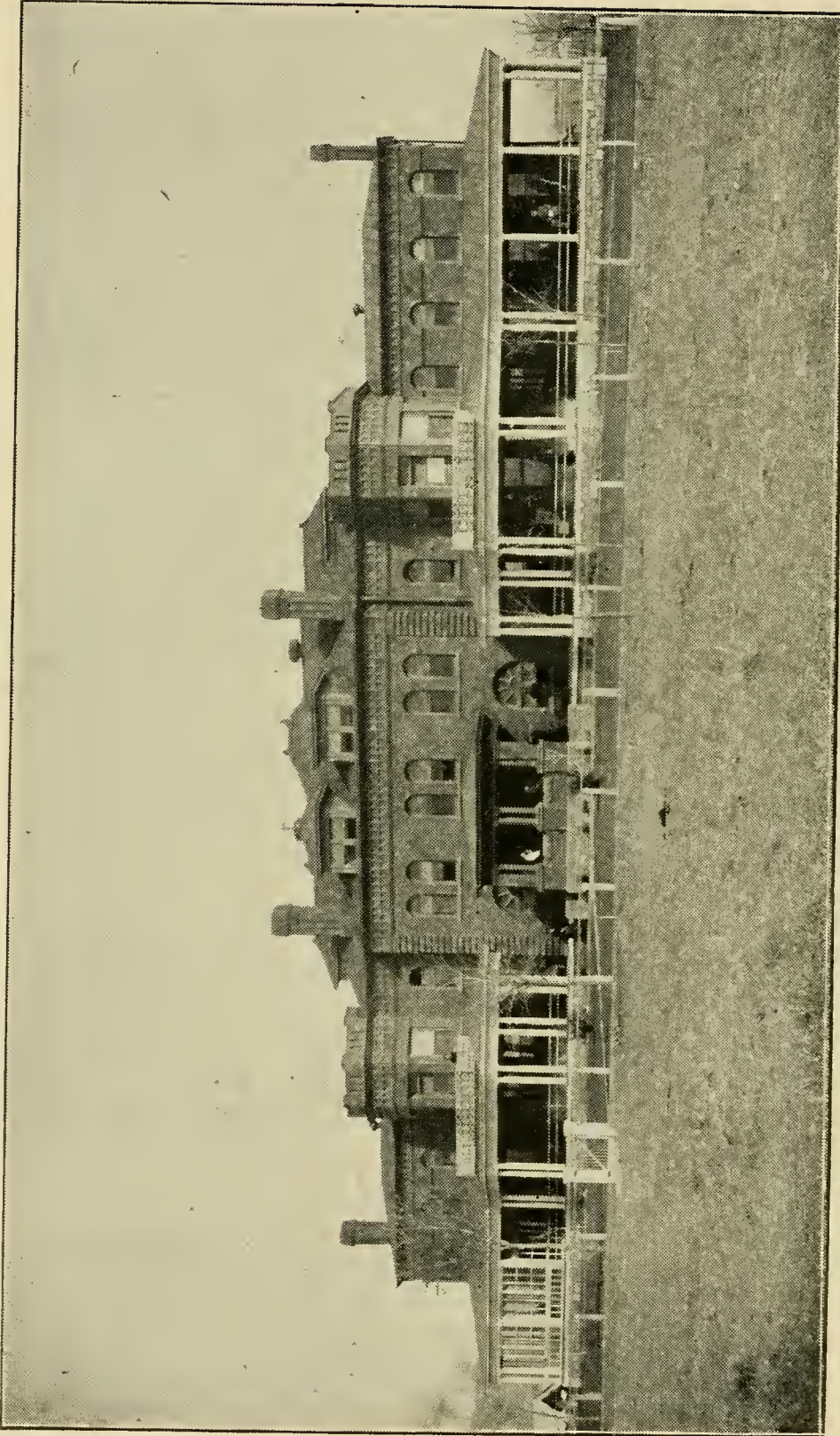
Sorghum also yields good crops and in many localities is grown for its sugar contents.

Wheat.

Wheat is a sure crop in New Mexico if sown early. The yield of wheat per acre is equal to the yield in the leading wheat growing states. New Mexico wheat received first premium at the World's Fair at Chicago and at other expositions. Before the building of the railroads the Taos and other valleys were considered the granaries of the southwest. All of the cereal crops will grow here.

Potatoes.

By many the potato has been considered an impossible crop, and yet the value of the potato crop in 1903 was nearly \$50,000. The difficulties in growing potatoes seem to be those of varieties and management under irrigation. Colorado failed in its first attempt to grow potatoes, but now this crop forms an important source of wealth in the Centennial State. Sweet potatoes are grown without difficulty.



ST. ANTHONY'S SANITARIUM AT LAS VEGAS.

Vegetables.

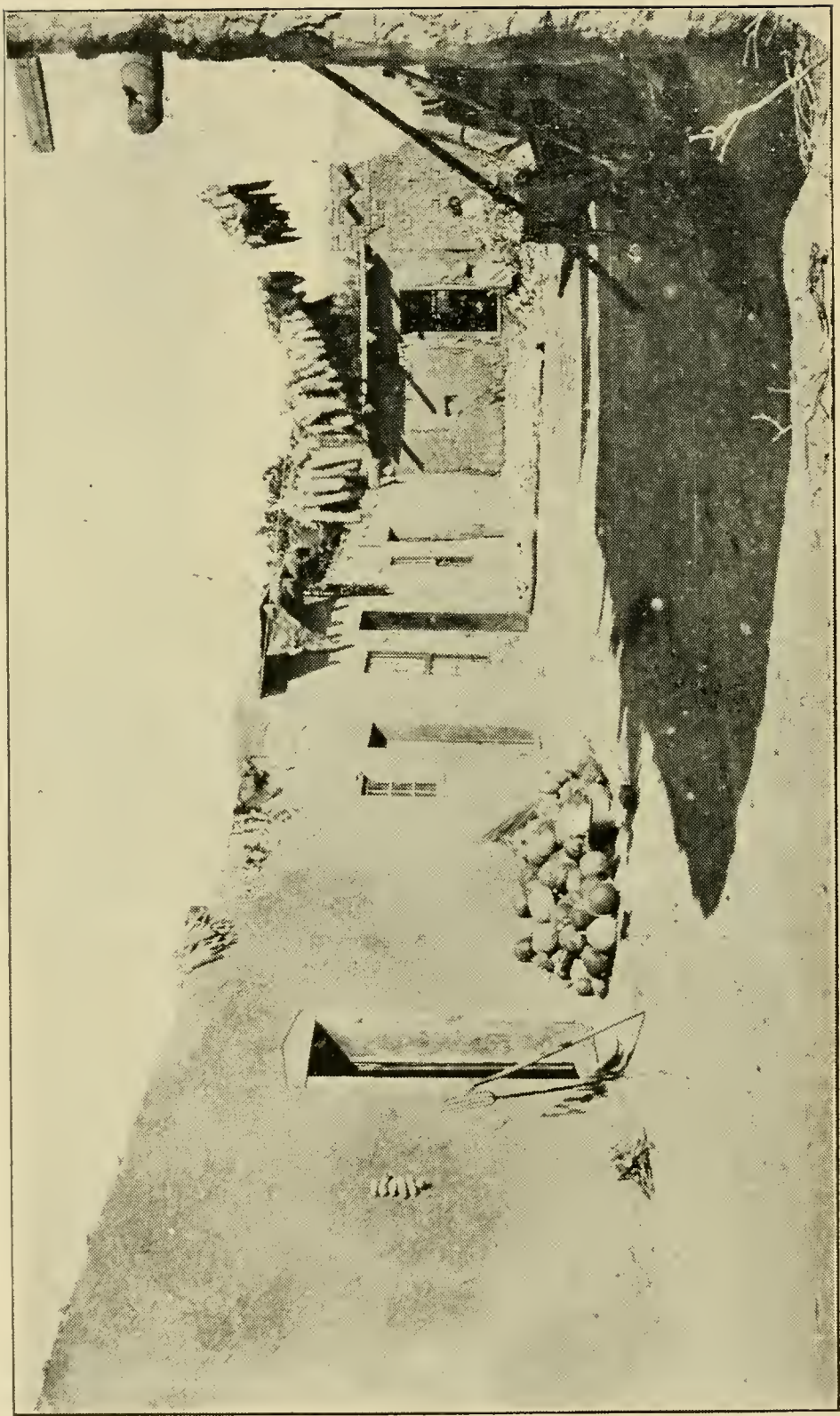
New Mexico produces vegetables as well as the staple crops, and wherever water for irrigation can be had, most vegetables do well. While truck gardening is not carried on very extensively, it is nevertheless increasing every year.

Celery can be grown to perfection in those parts of the Territory where the soil and climatic conditions are favorable and where some care in growing it is exercised. Among the best known celery growing sections are Santa Fe, the Rio Grande Valley and Roswell. The latter place is probably the most noted for its celery. It produces a large quantity, but not enough to supply the demand. It is claimed that the Roswell celery is superior to the product from California and Louisiana, and will sell equally as well in the markets outside of the Territory.

Fine Rocky Ford cantaloupes are raised here. Cantaloupe growing is getting to be quite a business in the southern portion of the Territory. Some are grown at Las Cruces for the early market, which are shipped mostly to the local markets in the Territory, but the large areas are found at Carlsbad and Roswell. From these points carloads of cantaloupes are sent to the eastern markets. It seems that there is no material difference between the New Mexico and the Colorado Rocky Ford cantaloupes. New Mexico, however, has the advantage of Rocky Ford in as much as the cantaloupes can be placed on the markets earlier.

The tomato grows well and is quite an important crop. While it is grown more or less in all sections the largest fields are in the Mesilla Valley. A canning factory is established at Las Cruces which cans a large quantity of excellent tomatoes. The canned tomatoes are sold in New Mexico, Texas, Arizona, Colorado and other states. The demand for these tomatoes is greater than the supply. The canned product has also added to the reputation of the Territory.

New Mexico is also known for the superior onions which it produces. While at present the area planted to onions is very limited, and the production insufficient to supply even one-tenth part of the home consumption, there is a bright future for it, and the chances are that it will become a crop of great



A GLIMPSE OF OLD SANTA FE.

commercial value. Probably the Rio Grande Valley is the largest onion-growing district, and here is where the old "El Paso" onion which has given New Mexico a reputation as an onion-raising section, grows so well. It is not infrequent to see specimens weighing one and one half pounds. The yield per acre is large. The results of the Agricultural Experiment Station show that such varieties as the Red Victoria will produce 32,000 pounds per acre.

In floriculture marked and rapid strides are being made, particularly in home adornment. Many of the flowering plants, like the rose, violet, chrysanthemum and sweet peas do well.

Dairying.

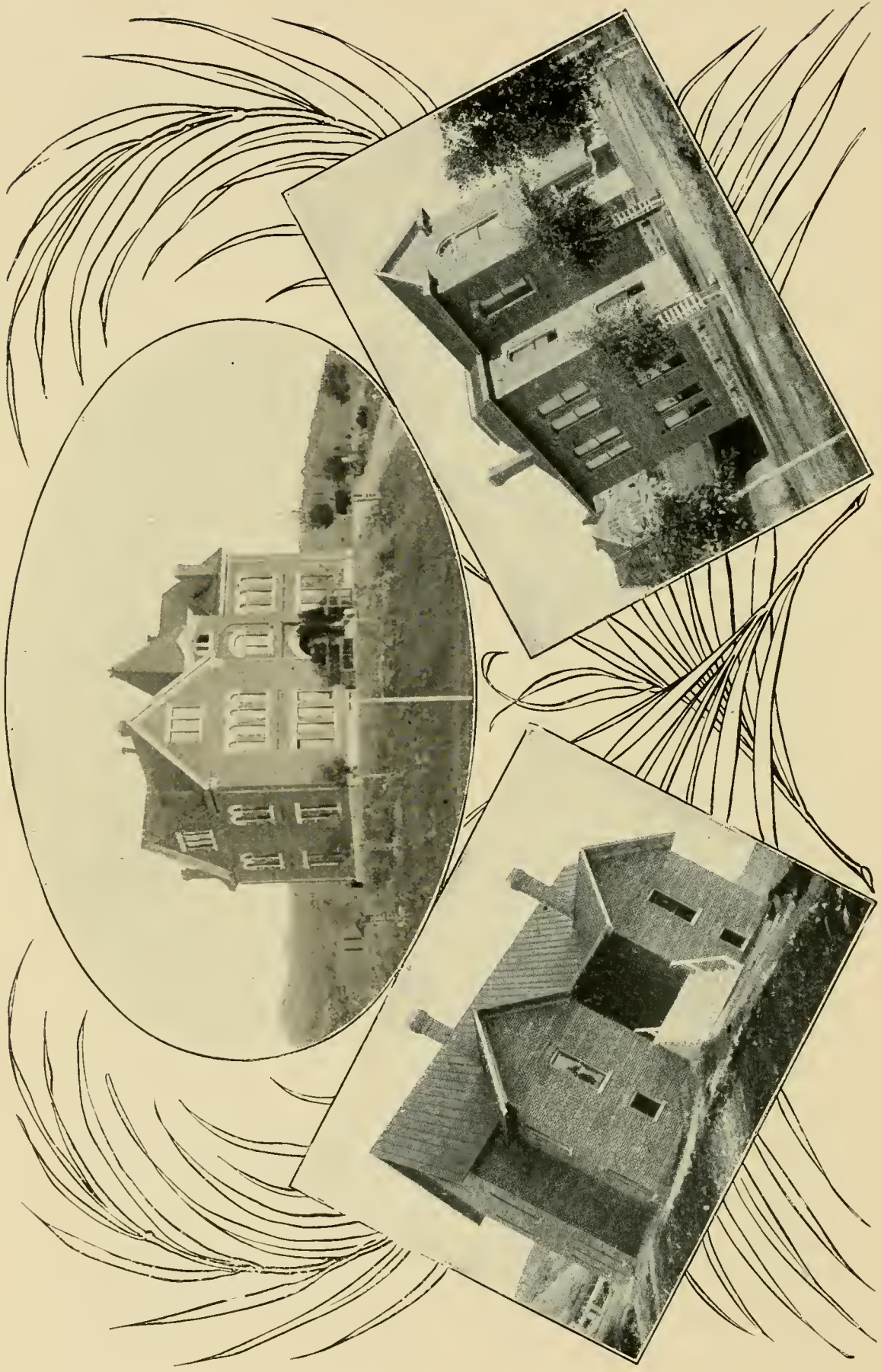
Dairying has kept pace with the demand in the vicinity of cities and towns where the products are sold in the form of milk and cream. There is not enough butter and cheese manufactured, however, to supply the demand, although there has been a considerable increase in their production. In 1889 there were manufactured 105,000 pounds of butter and cheese; this number swelled to 380,000 pounds in 1899.

Poultry and Poultry Products.

Annually thousands of dollars are poured into the pockets of Kansas and Nebraska farmers in payment for poultry and eggs consumed here, yet the Territory is well adapted to the raising of poultry. It has most of the advantages with but few of the disadvantages of other sections. Insect pests are no worse, while disease is rare. Prices are high, being governed by the price of the foreign product plus the transportation charges, therefore the home product has the best of it. It is evident that the New Mexico farmer is taking advantage of these favorable conditions, for the number of dozens of eggs produced increased from 1890 to 1900 from 280,000 to 840,000, yet there is need of a greatly increased production to supply the demand.

Apiarian Products.

With mild winters and abundant bee pasture, in the form of alfalfa, tornillo, etc., the apiarian products have increased over sixfold in ten years and are of considerable importance all



NEW MEXICO NORMAL SCHOOL AT SILVER CITY.

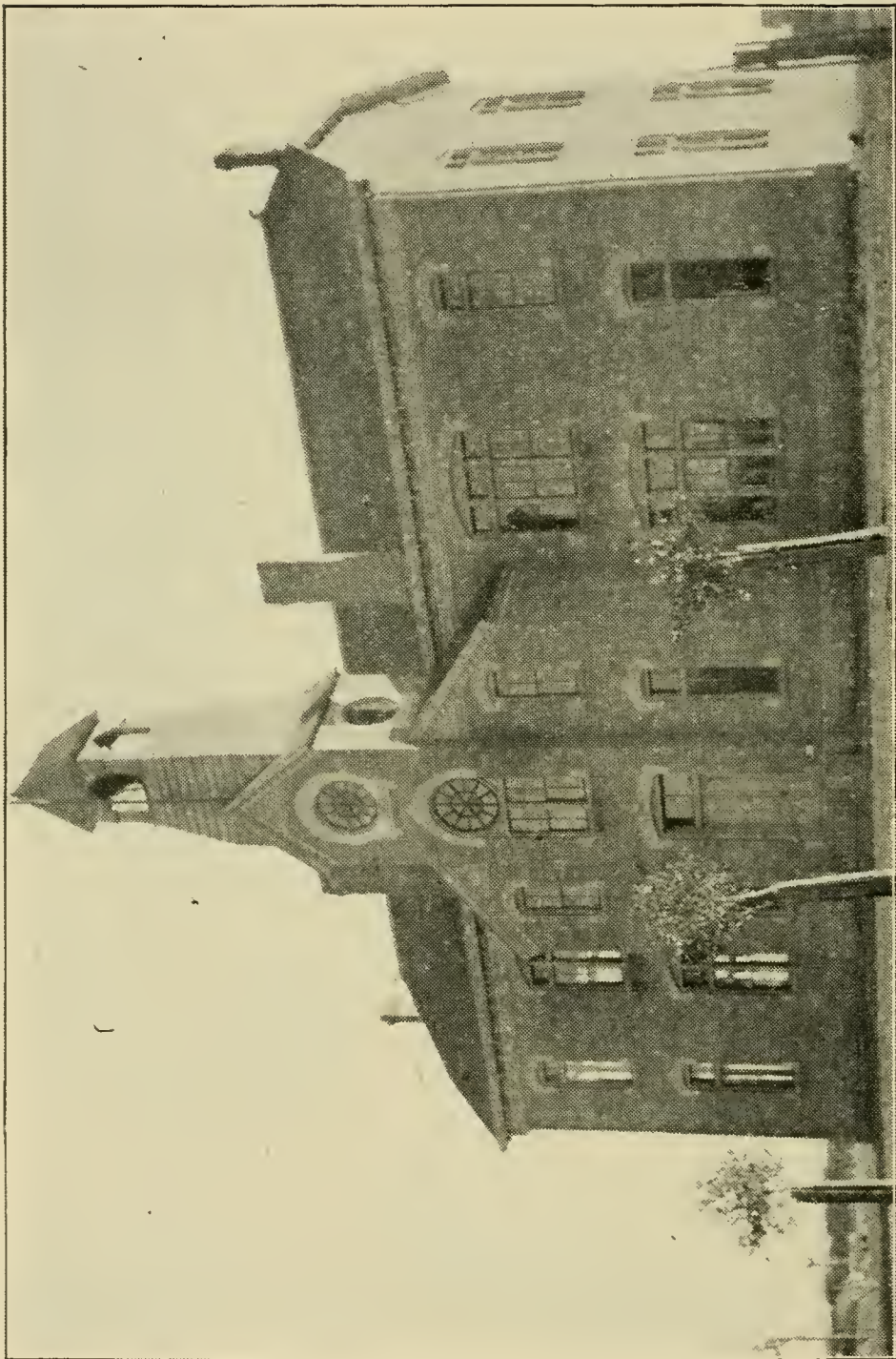
over the cultivated areas. Bee culture and the production of honey is very profitable and a pursuit especially adapted to those who are able to do only light out door work.

Horticulture.

Fruit growing in the horticultural sections is assuming large proportions, with practically no serious obstacle in the way of its becoming still greater, provided proper precautions to keep down insect and fungus pests are taken, as is done in other fruit growing states. New Mexico's orchards are equal to, if not superior, to those anywhere in the United States.

Of all the fruits, the apple is the most extensive and the most profitable crop. Notwithstanding the topography of the Territory, this fruit is well adapted to the different horticultural sections. The counties of San Juan and Santa Fe in the north, Bernalillo and Socorro in the central, Grant, Doña Ana and Otero to the south, and Lincoln and Chaves in the southeast, are favorably known for their apples. New Mexico is becoming famous not only in the United States, but abroad, for its superior apples. Its fruit is placed in competition with the world at the great expositions. In 1901 at Buffalo the apples from New Mexico were conspicuous, and the fruit from Roswell, in Chaves county, received a first prize, while in 1900 the New Mexico apples were carried across the continent and the Atlantic Ocean to the Paris exposition. There New Mexico was counted in with the best apple growing sections in the Union, as specimen apples from Doña Ana received second premium. This may give an idea as to the kind of fruit that can be grown in New Mexico. Not only is the fruit of superior quality, but the crops produced are enormous; as a rule the trees tend to overbear.

The apple orchards vary from small family places to very large commercial orchards. The larger commercial plantations are located in the Mimbres Valley, the Mesilla Valley, San Juan county and at Roswell. The Roswell district, which seems destined to become the largest apple growing section in the southwest, is particularly noted for its large orchards. The largest bearing orchard is that of J. J. Hagerman, and comprises something over 740 acres. The most profitable va-

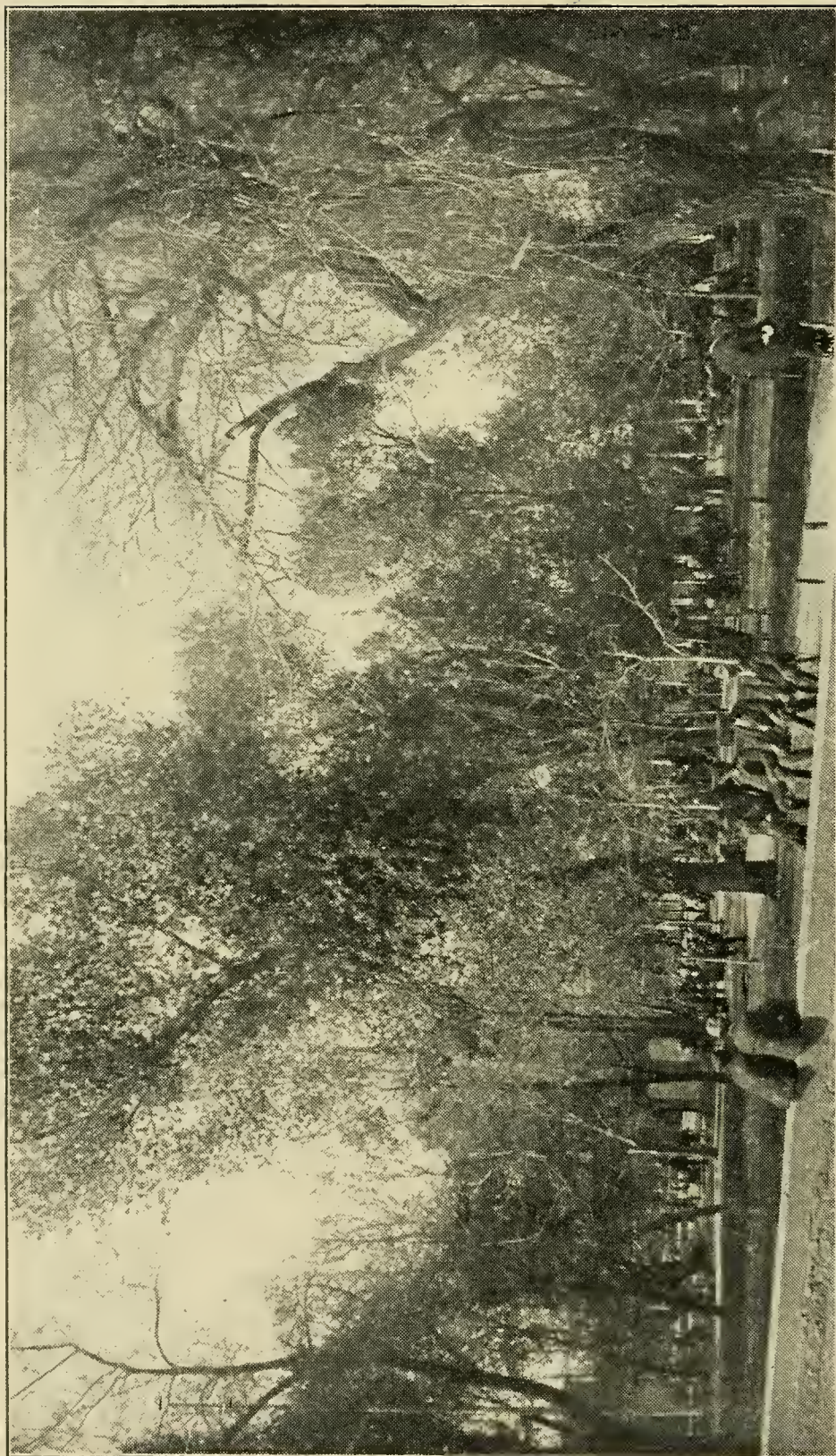


PUBLIC SCHOOL BUILDING AT SOCORRO.

ieties grown are the winter apples such as the Ben Davis, Gano, Missouri Pippin, Winesap and Mammoth Black Twig. In a lesser degree the early varieties are also prolific; among the leading kinds may be mentioned the Early Harvest, Red June, Yellow Transparent and the Maiden's Blush. The apples seem to be free from insect pests.

Other pomaceous fruits, like the pear and quince, thrive as well as the apple, but these are not so important nor are they planted in such large areas. The pear has a marked adaptability, the trees usually bear early, are among the best drouth resisters, and are long lived and hardy. The fruit, especially of the large varieties, like the Bartlett, Idaho, Beurre, Easter, grows very large and is of fine quality. At present the pear is as free from disease and insect pests as the apple. The dreaded pear blight, which is so destructive in the east, has not yet made its appearance here. There is a bright future for the more extensive planting of this fruit.

While peaches are grown in all the fruit growing sections, the larger commercial orchards are found in the Mesilla Valley, the upper Rio Grande Valley and at Carlsbad. These districts are especially adapted to certain varieties of peaches which find their way into the Colorado and Kansas City markets. The early-ripening varieties such as the Alexander, Sneed, Waterloo, Arkansas Traveler and Hyne's Surprise, are among the successful and sure bearers. This is due to the fact that as a rule the early varieties are the late bloomers, blooming late enough to escape the late spring frosts. The late ripening peaches ordinarily bloom from eight to ten days earlier than the early kinds. The peach trees usually begin to bear at three years from the time of planting. The tendency of the trees is to overbear and it becomes necessary to thin them in order that the fruit may not be too crowded. In size and quality, New Mexico peaches are not excelled by peaches from the best peach growing states. It is the common opinion of those who have tasted both the California and New Mexico peaches that the latter are the better in quality. The fruit is as a rule highly colored, due perhaps to the more continuous sunshine during the ripening period. The peach is free from the serious diseases and insect pests. Probably the profitable period of the peach tree in New Mexico, is from



THE PLAZA AT SANTA FE.

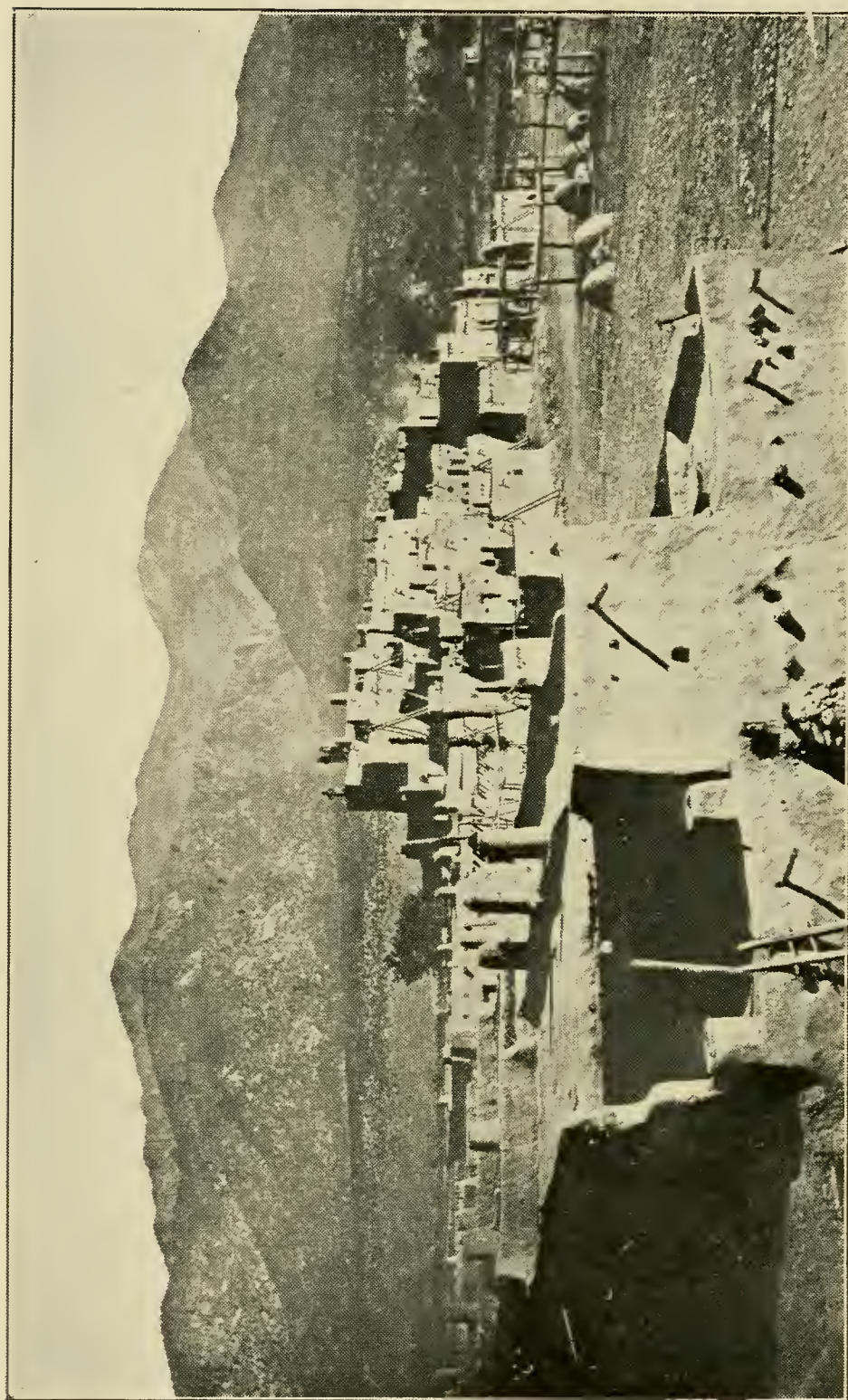
ten to twelve years. By replanting an orchard at intervals of five to eight years, a profitable orchard can be kept up almost indefinitely.

In New Mexico as in other places, where the apricot grows, it has given evidence of a longevity greater than that of any orchard tree, with the possible exception of the pear tree. It is not uncommon to see very old seedling apricot trees growing in the native home places in the Mesilla Valley, and at Santa Fe seedling apricot trees are known to be about 200 years old. The fruit from the improved kinds is as large and as good in quality as the California apricots. The Blenheim, Moorpark, Royal, St. Ambroise and Luizet are desirable for home planting.

Cherries are only raised on a small scale. The trees of both the sour and sweet groups grow well. Varieties of the sour cherries are the best bearers, but the fruit is not as large as that from the sweet varieties. The sour varieties predominate as they have proven to be more regular and surer bearers. The Early Richmond, English Morello, Ostheim and the Montgomery are among the leaders.

The plum is making a place for itself. There is a growing demand for it. The tree is perfectly hardy, although there is some variation as to the fruitfulness among the trees of the different types. The three types are, first, the European plum, which is the plum that gives rise to the old varieties, such as the Green Gage, Yellow Egg, Damson and the various prunes; second, the Japanese plums, which are entirely different from the former type; and third, the native type, such as the Wild Goose. As already stated, it is a well established fact that the selection of varieties is an important consideration, and this is particularly true in regard to plums. The European plums do admirably. The trees are thrifty, heavy and sure bearers. These plums are well adapted in every respect to the New Mexico conditions, and large and excellent quality fruit can be produced. A few of the leading kinds of this group which have been tested are the Clayman, Jefferson, Imperial and Transparent Gage, Yellow Egg, Pond's Seedling, Washington and the French and German prunes.

The native plums such as the Wild Goose, Golden Beauty and Pool's Pride, are sure bearers.



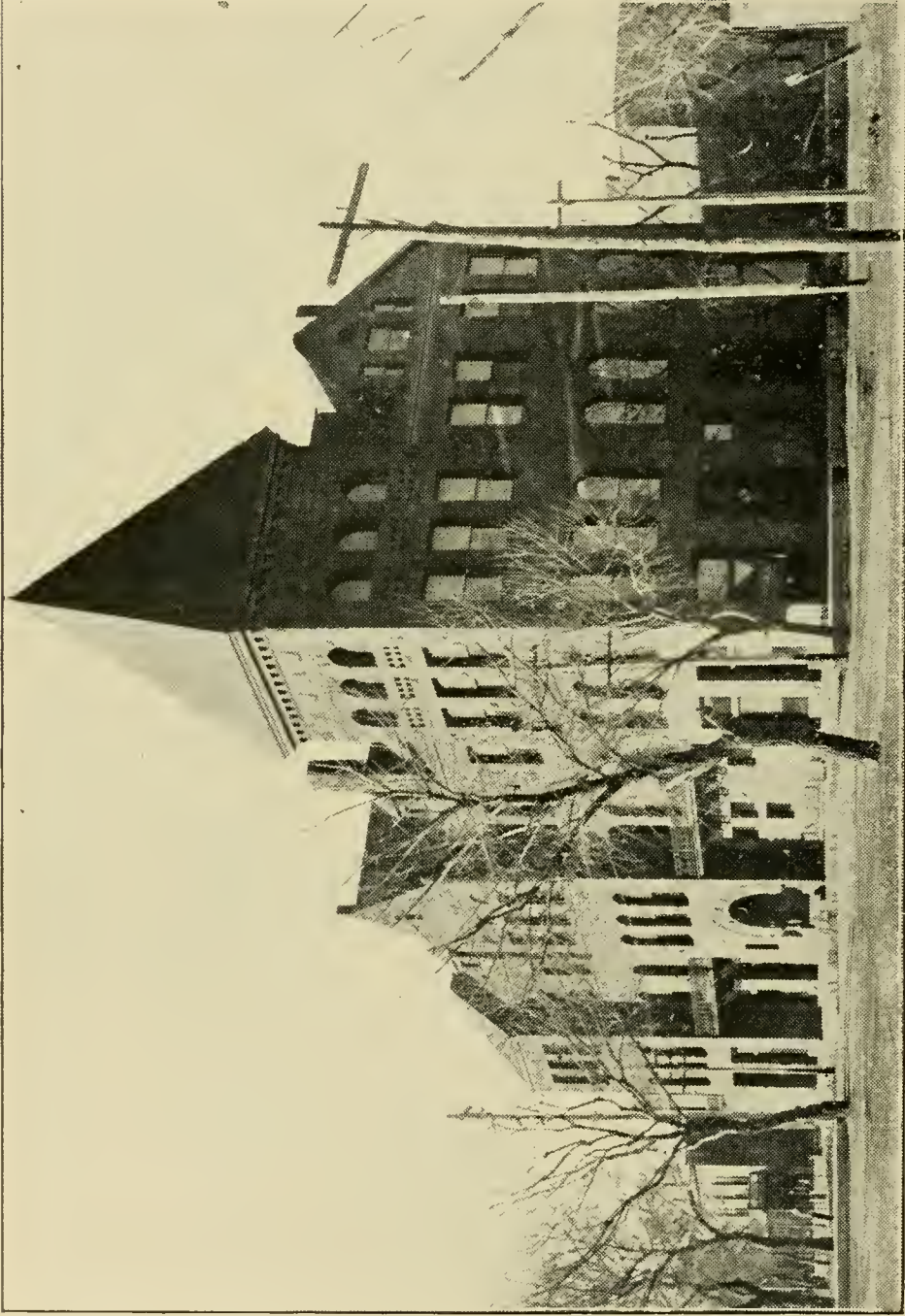
THE PUEBLO OF TAOS.

The Territory is celebrated for its grapes. The European, or the so-called California, grapes succeed well, and these are the kinds grown for the market. The native or American grapes are not so satisfactory for commercial purposes, and are grown only for family use, although at Santa Fe excellent results have been obtained with the Diamond and other native varieties. The European grape has been cultivated for over a century, but its culture generally speaking, has been confined to the southern and hotter valleys, and particularly to the Rio Grande Valley from the Texas line to Santa Fe. The varieties that constitute the commercial vineyards are the Missouri, Muscat of Alexandria, and more or less the Gros Colman and Flame Tokay. These grapes are shipped to the Texas, Louisiana and Colorado markets, where they have given New Mexico a reputation for fine grapes. The Mission grape, while quite late in ripening, is the most popular and possesses some excellent qualities as a table and wine grape, and is the grape of New Mexico at present. The Rio Grande Valley, and particularly the Mesilla Valley, is especially suited to the grape, and when its possibilities in this direction are more fully understood by the people, New Mexico will become a vast grape producing section. The grape-shipping season extends from about the 20th of August till the last of September. This short season is due to the commercial grapes being all midseason varieties. Early and late ripening varieties need to be added to the large vineyards in order to extend the shipping period. There were 1,180 acres in bearing vines in 1900 and 9,000 acres of young vines.

Small fruit does well and yields big profits, especially currants, raspberries and gooseberries, which obtain a size and flavor that are excelled nowhere, nearly all varieties flourish and yield good crops year in and year out.

Orchard Crops.

There were 719,057 bearing fruit trees in 1900, which produced 263,870 bushels of fruit. The value of all orchard products in 1899 was estimated at \$197,335. There is a noticeable increase in the amount of dried and evaporated fruits, which indicates that culls and marketable products are being more generally utilized. In the near future New Mexico will prob-



THE COMMERCIAL CLUB BUILDING AT ALBUQUERQUE.

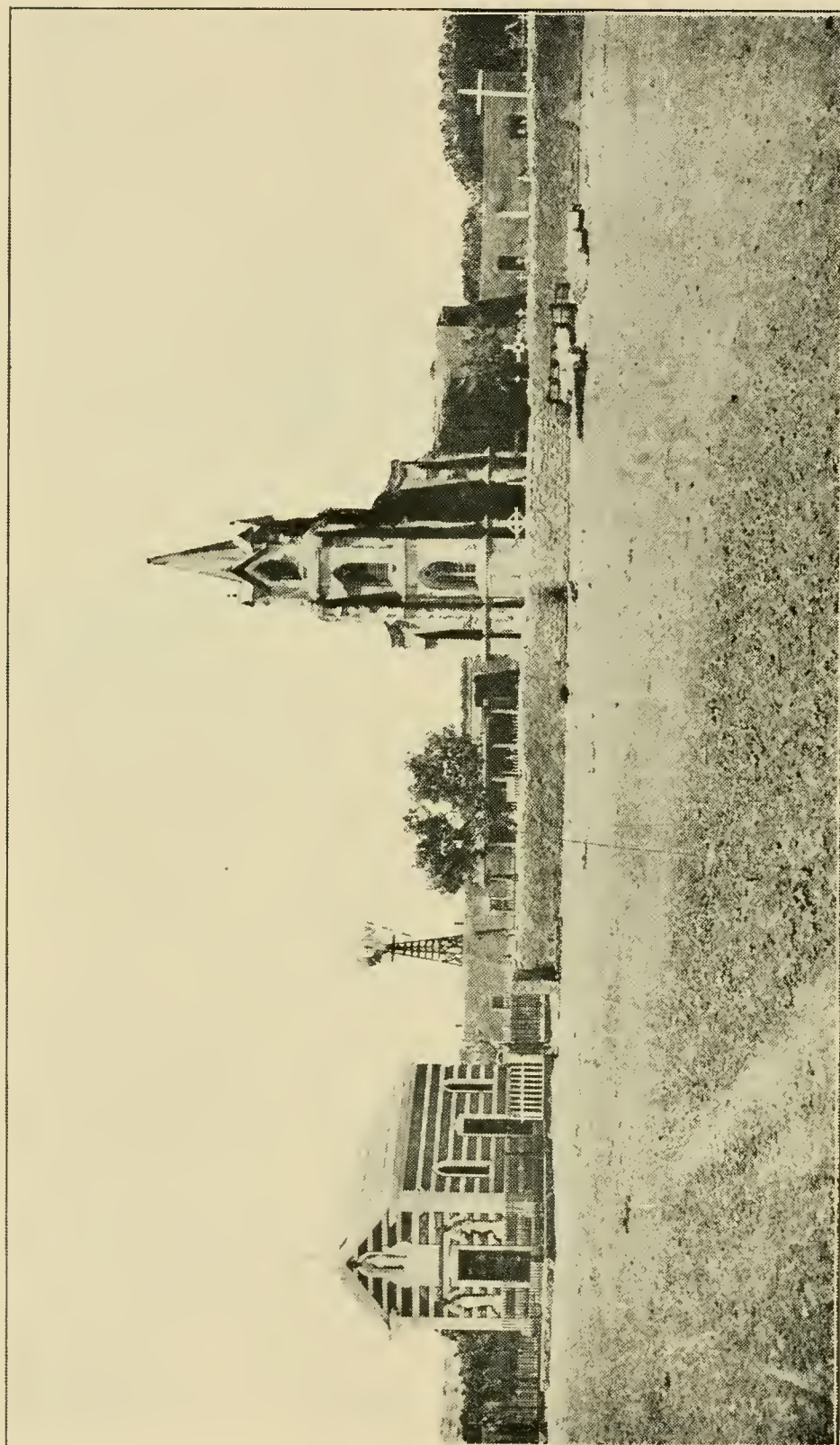
ably be able to supply its own markets with jams, jellies, marmalades, etc., manufactured from such fruits as generally go to waste, thus effecting a great saving.

Where Agriculture Can be Pursued Successfully.

There are many thousands of acres in New Mexico, aside from those already in use, which can be utilized for horticultural purposes. The portions of the Territory which are suited to horticulture are the river bottoms or valleys and the smaller valleys along the mountain streams. There are also large areas, commonly known as the mesas or uplands, which have the finest soil, and which would produce good crops. The largest horticultural districts are the Rio Grande Valley, extending from Embudo to the Texas line, taking in portions of the counties of Rio Arriba, Santa Fe, Sandoval, Bernalillo, Valencia, Socorro, Sierra and Doña Ana; the Pecos Valley, mostly in the counties of Chaves and Eddy, the Animas and the San Juan Valleys in San Juan county and the Mimbres Valley in Grant county. Other notable but smaller sections are found in the counties of Colfax, Otero, Lincoln, Rio Arriba, Taos, Mora and San Miguel. The altitude of these different parts ranges from 3,000 to 7,500 feet.

The soil varies from a sandy loam to a heavy clay, and is ordinarily fertile enough to produce good crops if water is obtainable for irrigation. Its fertility is demonstrated by the rank and rapid growth of the trees and plants.

Since New Mexico lies in the arid zone the rainfall being insufficient cannot be depended upon for the growing of fruits and vegetables. Occasionally, in the mountain districts, where the rainfall is more abundant and the humidity greater, some crops of fruits and vegetables are grown without irrigation, but one should not depend altogether on this. Irrigation is the only sure means of growing crops in New Mexico. By this means, other things being equal, the largest crops of excellent quality can be grown, and then, the danger of floods and drouths is in a great measure mitigated. It is true, that the irrigation of fruits and vegetables costs money, energy and some skill, but the rewards are great and sure. With irrigation, the crops need not suffer from either too much nor



CHURCH AND MAUSOLEUM AT BELEN.

too little water and the land can be made to produce abundantly every year.

In order to bring into play the favorable soil, water and climatic conditions to the best advantage, the adaptability of varieties of trees and plants should be considered. It is not infrequently found that some varieties, although they may be among the leading ones in other states, are partially or entirely worthless in New Mexico, particularly of the stone fruits. On the other hand, some less valuable kinds in other sections succeed admirably in many parts here. In other words, the proper selection of varieties is an important factor in the success of the horticultural operations, and this is being realized more and more.

While horticulture is one of the leading interests and people of all classes are more or less interested in some branch of it, the possibilities in this direction are not fully realized. Only a small part of the land that is adapted to horticulture has been used. In recent years there seems to have been more interest taken in horticulture, and no doubt marked improvement will soon take place in this line.

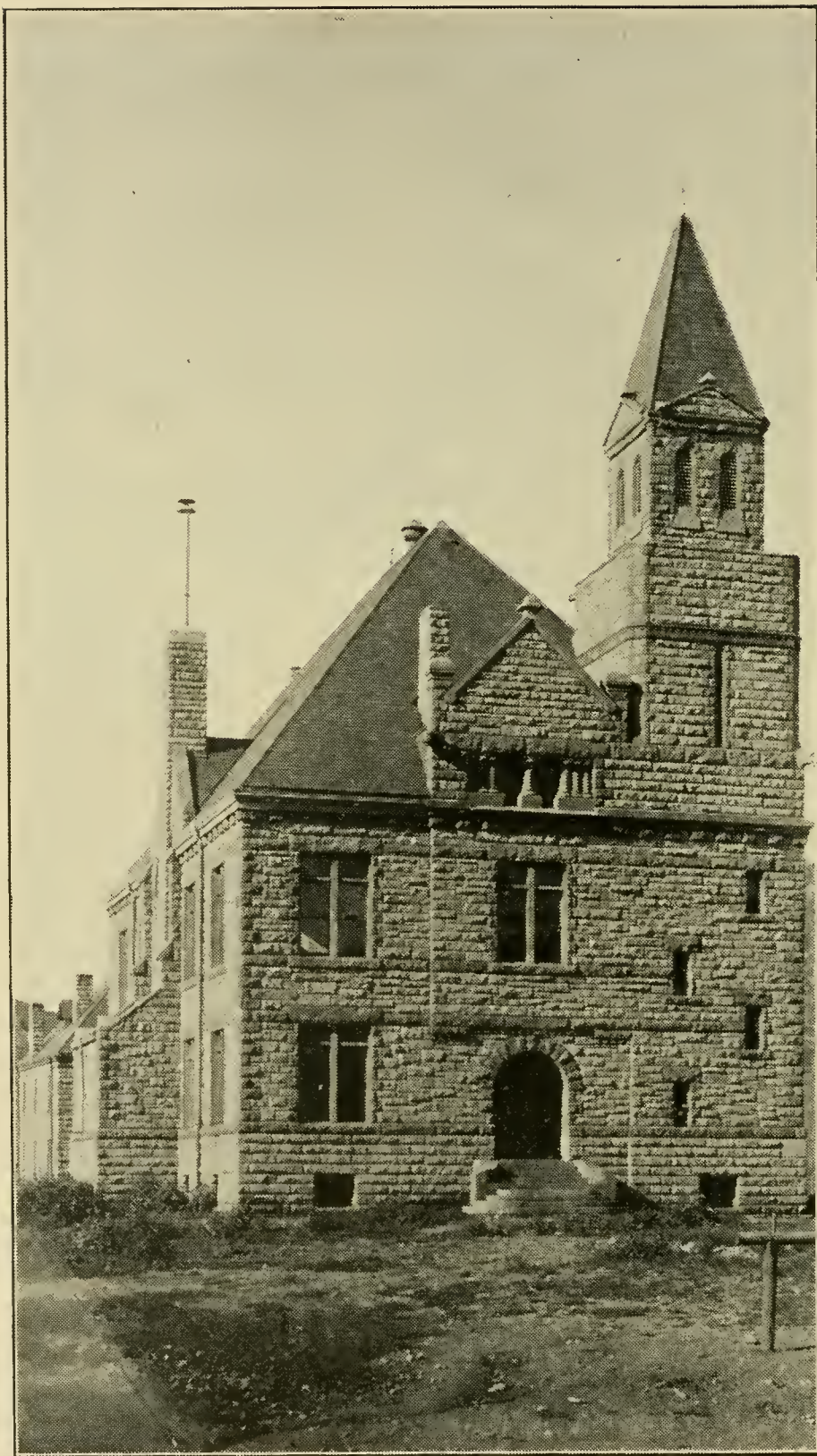
Sugar Beets.

New Mexico ranks first among countries best suited to the growth of high grade sugar beets. In nearly all localities where good beets can be grown there may also be found fuel, limestone, and water of good quality, as well as cheap labor. In the face of these facts, it seems that New Mexico should soon have sugar factories.

Conditions are very similar to those in Colorado. In fact, in some respects superior, for both labor and land are cheaper.

No doubt when it becomes known that New Mexico is even better suited than Colorado for both the growing of beets and the manufacture of sugar, capital will develop this industry as it has others of this Territory. New Mexico laws exempt all sugar factories from taxation for a period of six years.

The United States Department of Agriculture, through a series of experiments for a number of years, has proven conclusively that a mean temperature for the months of June, July and August, of about 70 degrees is the ideal temperature for the growing of beets of high saccharine contents. The



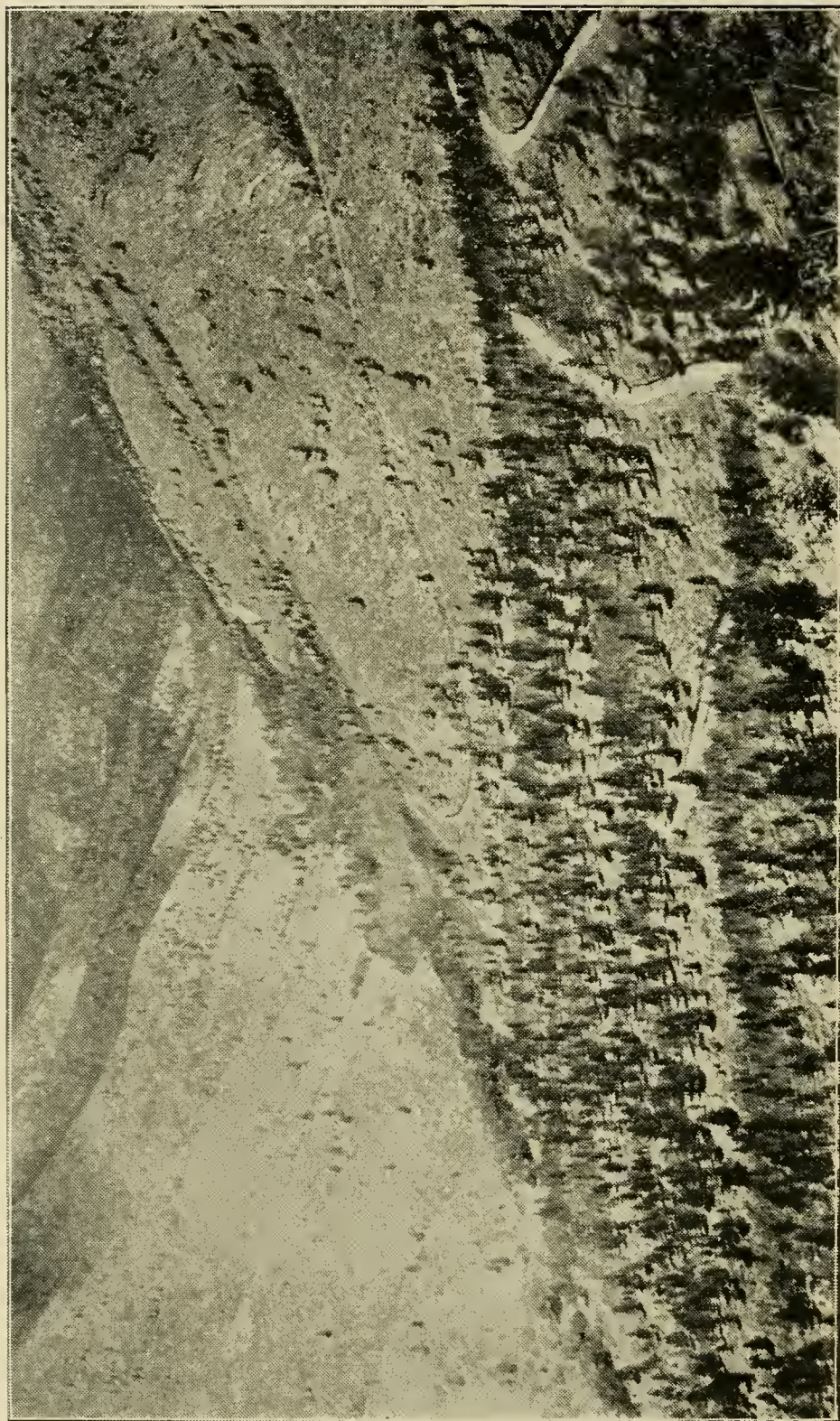
COURT HOUSE OF MORA COUNTY AT MORA.

isothermal sugar zone, or that belt of the United States best adapted to the growth of sugar beets, has been carefully mapped by Dr. H. W. Wiley, chemist of the United States Department of Agriculture. It extends east and west across the United States, and embraces that portion having a mean summer temperature between 69 degrees and 71 degrees Fahrenheit. Entering the northern boundary of Colorado, it passes through the entire state and into New Mexico where it forms a loop in the extreme southern part of the Territory somewhere north of and near Las Cruces, and passes upward again and out in the extreme northwestern part. With the exception of the lower Pecos and Mesilla Valleys, the entire agricultural part of New Mexico has the proper climatic conditions for the cultivation of sugar beets. Beets grown in New Mexico when fully matured, have shown a high sugar content. Doctor Wiley, who is undoubtedly the principal authority on sugar beets today, has the following to say concerning New Mexico:

"It is evident that there are many localities in New Mexico where conditions of temperature are most favorable to the growth of beets. There are also large areas of comparatively level lands which are capable of irrigation. Wherever the temperature of these regions is sufficiently low to permit the proper development of the beet, and where sufficient water for irrigation can be secured, there is good reason to believe that the industry may be established and prove to be profitable. While the summer days of New Mexico are not so long by an hour or more as in the regions farther north, the amount of sunshine which the growing beets will receive, is practically as great as in more northern localities, because of the comparative absence of cloudy and rainy days."

The same scientist tabulates analyses of sugar beets grown in the different states and territories. It will be seen that New Mexico grown sugar beets have a higher percentage of sugar than those of any state which at that time had sugar factories in operation. It will also be observed that the percentage of purity of juice from New Mexico is very high.

The following table gives the sugar contents and purity of juice in New Mexico beets and beets from other states in which beet sugar factories have been located:



SCENIC ROUTE ROAD ON THE PECOS RESERVE.

State.	Sugar in beet. Per cent.	Purity in juice. Per cent.
Michigan.....	14.7	81.1
California.....	16.8	—
Colorado...	13.6	76.6
Utah.....	14.3	81.1
Nebraska.....	12.9	76.9
New York.....	15.	82.4
Oregon.....	(a)	(a)
Washington.....	13.7	80.7
Wisconsin.....	15.8	83.3
Ohio.....	13.8	79.1
Minnesota.....	11.	79.2
New Mexico.....	17.2	82.

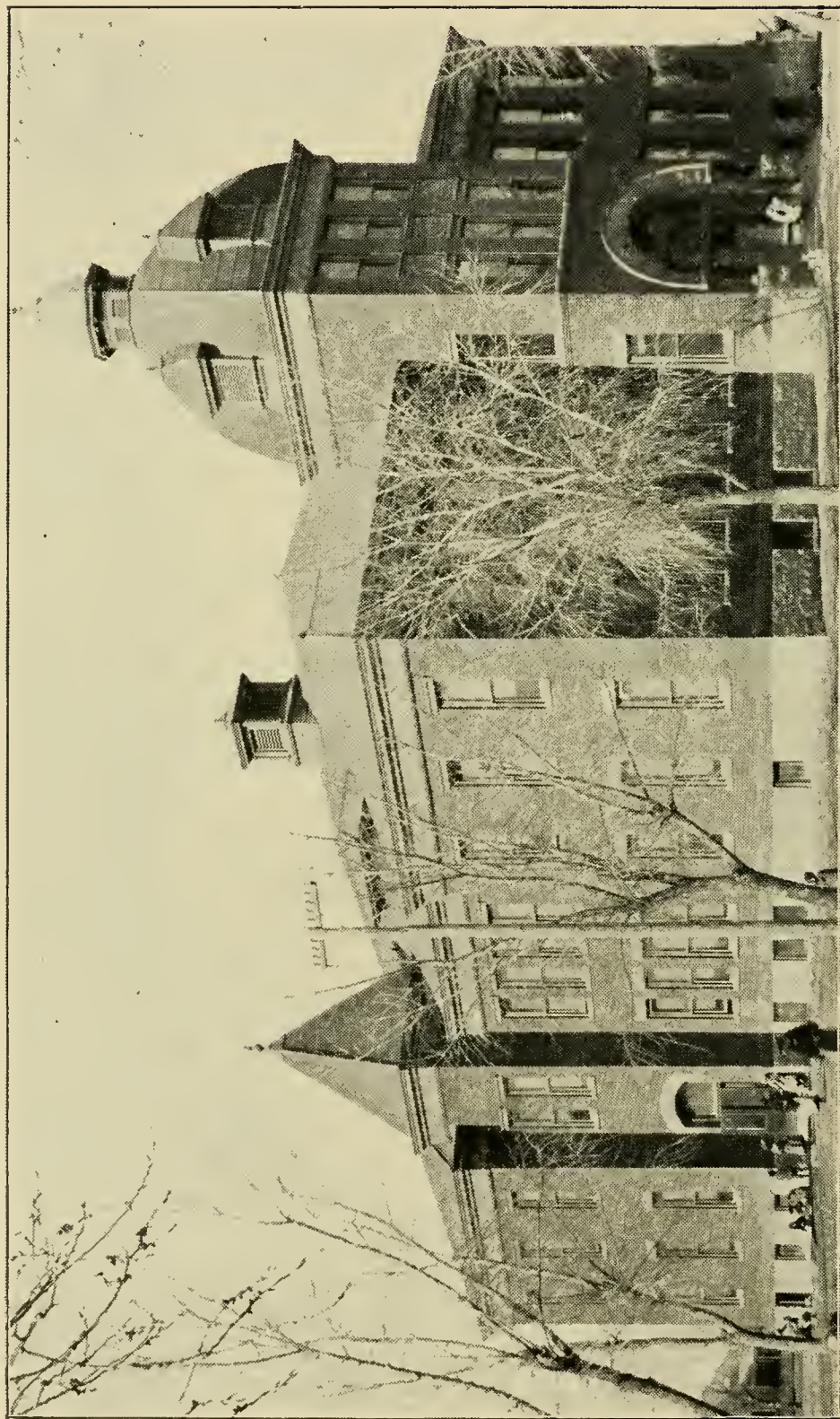
(a) Results not given in table.

It is estimated that the people of New Mexico consumed 15,750,000 pounds of sugar last year. Not one pound of this sugar was manufactured in the Territory, notwithstanding the fact that natural conditions are better suited to sugar beet growth and beet sugar manufacture than almost any other place in the United States, and possibly in the world.

Tobacco.

Tobacco has been cultivated in New Mexico for hundreds of years. It is more than likely that tobacco originated here and found its way into other countries. Wild tobacco, called "puncha," grows all along the foothills of the mountains. Many farmers continue to grow tobacco of seeds from the original plant, preferring it to Havana or any other variety. The cultivated plant is very similar to the native. The native farmers do not sow the seed in beds and transplant, but drill in rows. The plants are from five to five and a half feet high and have about forty leaves. They are small and resemble Turkish more than any other variety in growth and shape of leaf.

Eleven small beds were prepared in gardens in Bernalillo county last year. Sumatra, Turkish, Havana, Connecticut, Virginia and Kentucky burley seed were sown and covered with glass. This was necessary, as it was late in the season and the plants had to be forced. If the beds had been sown



PUBLIC SCHOOL BUILDING AT ROSWELL.

late in February or the early part of March, a covering of canvass or cheese-cloth would have been sufficient. Suitable lands were selected for the experiment. The first transplanting work was done on May 26 and finished July 10. The crop grew nicely and gave a fine yield of superior quality, with points in favor of Kentucky burley and Turkish.

Tobacco of all varieties will grow well and has an unusually fine flavor and aroma. Several acres of Sumatra have been planted between rows of Kaffir corn six feet apart. It was shown by this experiment that the corn gave sufficient shade to the plants to make a very fine leaf, and that the great expense of covering the field with canvass is not necessary.

Cotton.

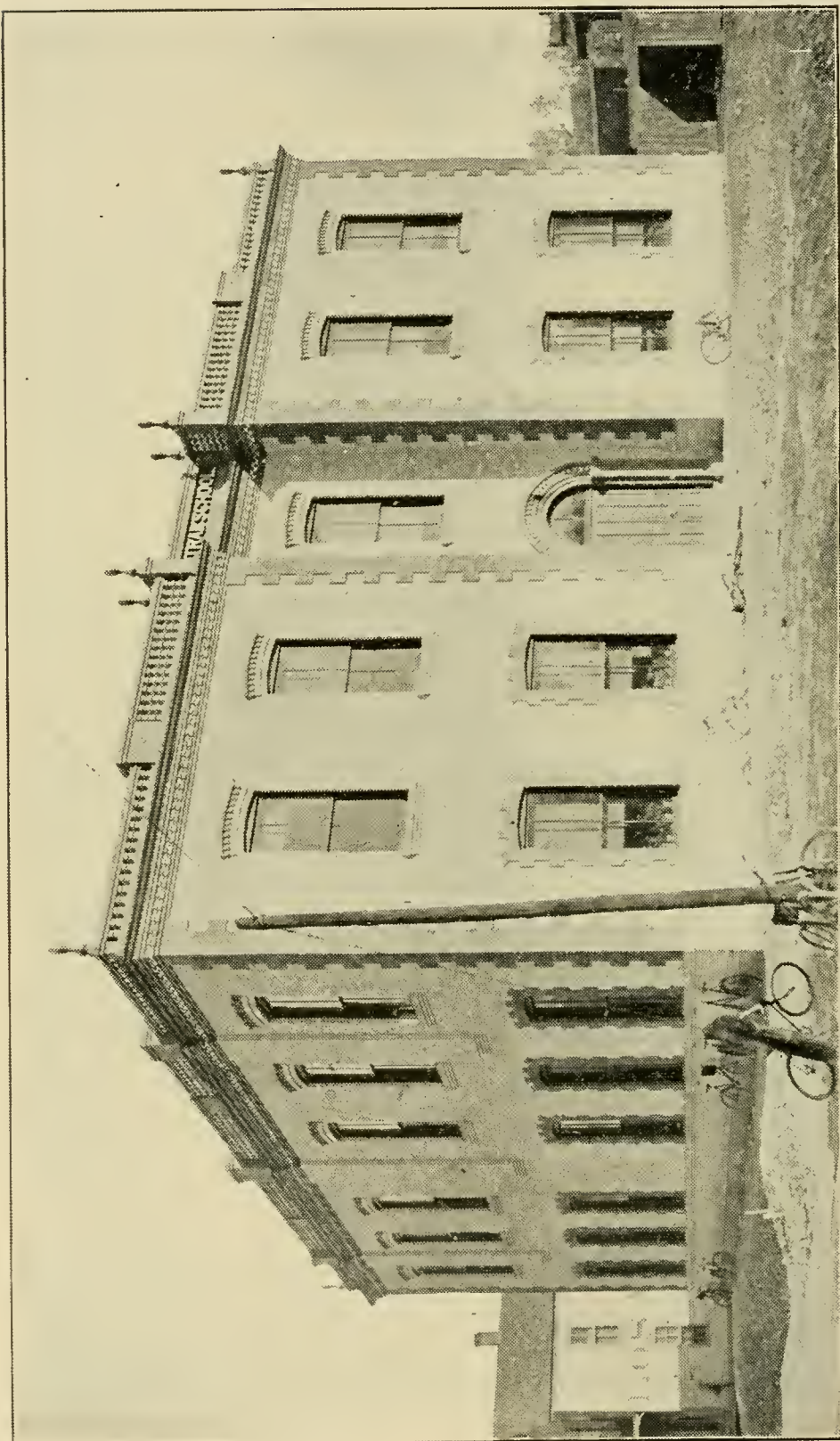
Cotton is raised successfully in Eddy county. A cotton gin has been erected at Carlsbad. Cotton is also grown on a small scale in Chaves, Roosevelt and Quay counties. Two thousand acres were under cultivation in Eddy county during the 1904 season.

The Soil.

The soil of the valleys of New Mexico is superior in productive capabilities to the alluvial soil of the prairie states. The secret of its producing power probably lies in the large amount of sediment contained in the irrigation waters. The Nile Valley, with its irrigation waters loaded with sediment, is considered one of the most fertile in the world, and yet in New Mexico there are a number of Nile Valleys in miniature.

The crops are not seriously troubled by either insect pests or fungus diseases. Much sunshine and dry climate prevent the growth of fungi and, therefore, these are not likely to become troublesome. The insect pests that have found their way here seem to be quite easily controlled by proper treatment.

It is quite a common custom, especially among the native population, to grow two crops on the same land in one season, that is, a crop of wheat and a crop of corn. This system would be inadvisable in the rain belt, but in sections where irrigation is employed and the water applied is loaded with rich sediment, it is a question if any serious criticism of this practice can be made.



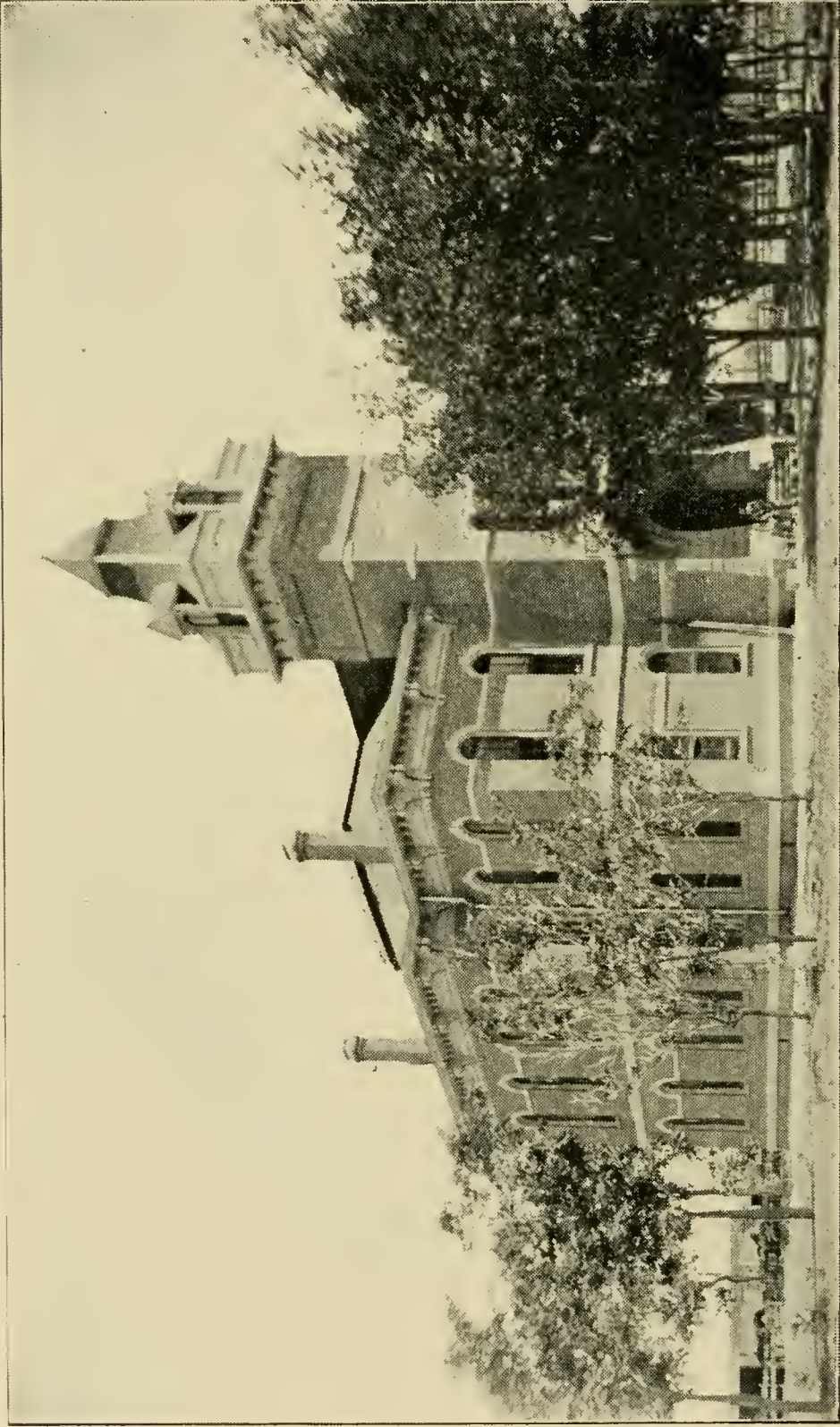
PUBLIC SCHOOL BUILDING AT ALBUQUERQUE.

New Mexico's climate is a source of wealth to its people. Agricultural operations, especially in the southern half, are carried on throughout the year. Ground may be plowed any time during the winter, and cereals and alfalfa are sown during this season of the year, thus leaving the summer months free in which to harvest the cereal crops and the four or five cuttings of alfalfa.

The principal agricultural and horticultural counties are Colfax, San Juan, Rio Arriba, Taos, Chaves, Eddy, Santa Fe, Doña Ana, Socorro, Valencia, Mora, Sandoval, Roosevelt and Bernalillo, although good agricultural land is found in every county.

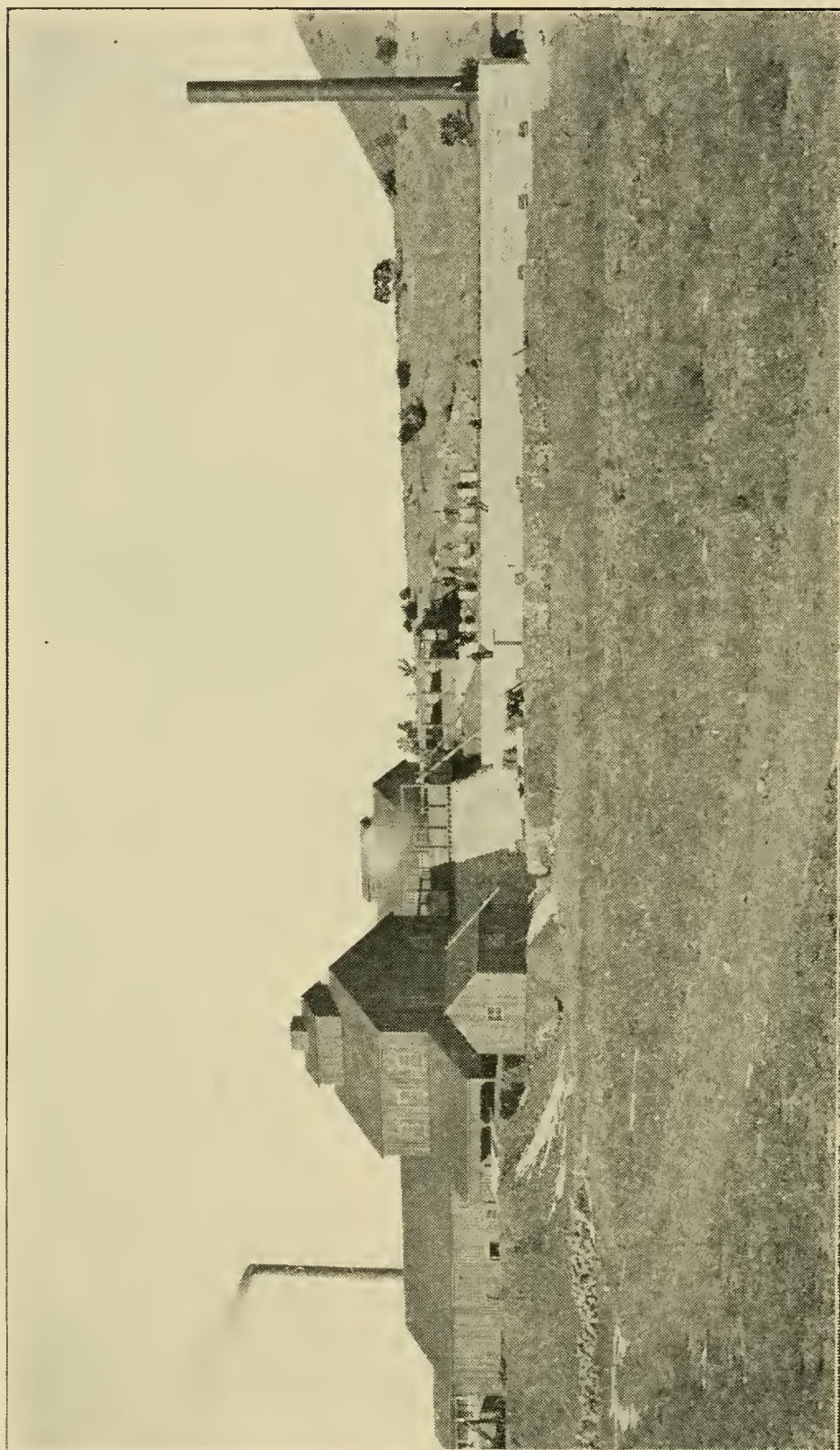
Results.

At the Pan-American Exposition at Buffalo, an agricultural and horticultural exhibit from New Mexico received two gold medals, three bronze medals, and five certificates of honorable mention in competition with the rest of the North American as well as the South American continent. At the Louisiana Purchase Exposition at St. Louis, peaches from Roswell and Carlsbad received first premium in competition with peaches from California. The following figures are culled at random from reports in local newspapers made to them by farmers and horticulturists or by reports made to the Bureau of Immigration: Capt. J. P. Casey from a ranch of $112\frac{1}{2}$ acres, 100 acres of which are in alfalfa, one-half mile north of Las Cruces, while he was its owner, had an average income per year since 1896 of \$6,000. J. L. Wilson of Roswell sold \$800 worth of tomatoes from a two acre lot on which the net profit was \$550. Samuel Johnson on a three acre lot at Roswell raised \$2,500 worth of truck, one-half of which was profit. George Davis from thirteen acres of fruit in Chaves county in one year sold \$1,807 worth. J. C. Lea of Roswell in an off year for apples, sold \$90 worth of this fruit from eight trees. A. J. Gilmour of Flora Vista, San Juan county, sold \$600 worth of onions from one acre. W. H. Williams of San Juan county harvested 350 tons of alfalfa from sixty acres. W. H. Knight of Farmington sold 500,000 pounds of fruit from an eighty acre orchard, receiving on the tree, one cent a pound for apples, two cents a pound for grapes and three cents for prunes. He had one peach tree that yielded 700 pounds at



COURT HOUSE OF DONA ANA COUNTY AT LAS CRUCES.

one bearing. Andrew Stevenson of the San Juan Valley, received \$3,200 from the alfalfa crop of 100 acres. W. M. Farmer of Roswell made \$6,000 from twenty acres of celery. At the United States Industrial Indian School in Santa Fe on three-fourths of an acre 11,800 pounds of the best onions were raised in 1902, giving the school its entire winter supply of this important food vegetable and which if bought in the market would have cost four cents per pound or \$472. The Territorial penitentiary at Santa Fe on a plat of five acres raised sufficient vegetables of all varieties to supply the officials and inmates, about 300 in number, all the year around, with the exception of potatoes and tomatoes. The following were among some of the exhibits at recent agricultural fairs in the Territory: Barley seven feet high; oat heads thirty inches long; apples weighing each twenty-eight ounces and sixteen inches in circumference; pears nineteen ounces; peaches twelve ounces; Muscat grapes weighing twenty-five ounces per bunch; nectarines weighing six ounces; water melons forty pounds; heads of cabbages forty-two pounds; a bunch of nine sweet potatoes weighing eighteen pounds. One apple tree in Otero county in 1900 yielded 6,000 pounds and a peach orchard of 3,000 trees yielded 200,000 pounds. The following are average yields per acre: Oats seventy to one hundred bushels; corn forty to sixty bushels; barley sixty to eighty-five bushels; wheat thirty to forty-five bushels; alfalfa three to five tons; potatoes 300 to 500 bushels; sweet potatoes 600 to 1,000 bushels; cotton one bale; tobacco 1,000 pounds; cañaigre root two to three tons; onions 500 bushels; sugar beets sixteen to twenty-two tons, yielding from sixteen to twenty-two per cent. saccharine matter; Mission grapes 12,744 pounds, making 910 gallons of wine. One acre of asparagus from the third year yields 200 pounds a day for sixty days each year. In Eddy county the average return for each acre of sugar beets was \$67 and the average cost to the farmer \$22. Bees average sixty-five pounds each year per hive, although as high as 196 pounds per hive have been realized at Artesia, Eddy county. The average profit per colony per year is \$10. In years of ample rainfall an immense amount of gramma grass is harvested on the public range, an acre yielding from two to three tons of hay.

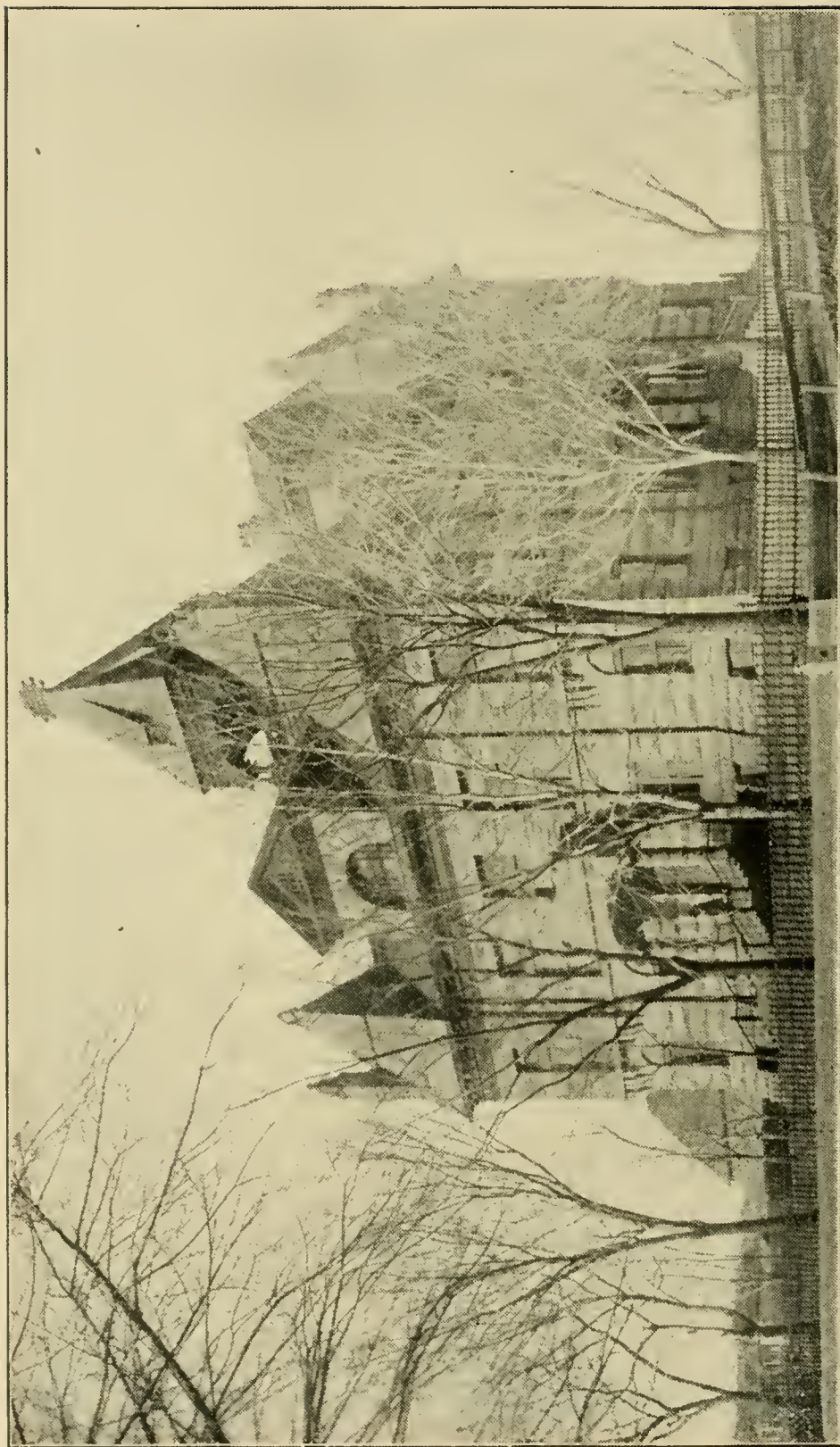


SMELTER AT CERRILLOS.

How to Secure a Homestead.

There are 52,000,000 acres of unappropriated public land in New Mexico. Agricultural public land is subject to entry only under the homestead and desert land laws. The homestead laws of the United States secure to qualified persons the right to settle upon, enter, and acquire title to 160 acres of public land by establishing and maintaining residence thereon and improving and cultivating the same for a continuous period of five years. A homestead entryman must be the head of a family or over twenty-one years of age and a citizen of the United States or one who has declared his or her intention of becoming such, and he or she must not be the owner of more than 160 acres of land in any state or territory. A wife who has been divorced from her husband or deserted by him can make homestead entry. Payment of \$16 fees and commissions must be made at the time of entry, and final proof can be made at any time when five years residence thereon and a cultivation of a portion of the land can be shown. The cost of making final proof, including publication of notice, taking testimony, and commissions is from \$14.26 to \$15. A person can, at the time of making homestead entry of 160 acres, enter 160 acres under the desert land act. He will be required to pay twenty-five cents per acre at the time of making the entry, after which he is required to expend \$3 per acre (\$1 per acre each year for three years) in labor or money in improving the land and constructing reservoirs, canals and ditches for irrigation and reclaiming the tracts entered; and the person can make final entry at any time prior to the expiration of four years on making the required proof of reclamation, of expenditure to an aggregate amount of \$3 per acre, and of the cultivation of one-eighth of the land and making a final payment of one dollar per acre.

In taking up a homestead, first possession may be obtained for ninety days by cutting four logs twelve feet long for a foundation of a house, putting up a notice and making improvements from time to time. At the end of that time the entry must be completed.



COURT HOUSE OF SAN MIGUEL COUNTY AT LAS VEGAS.

The Stock Industry.

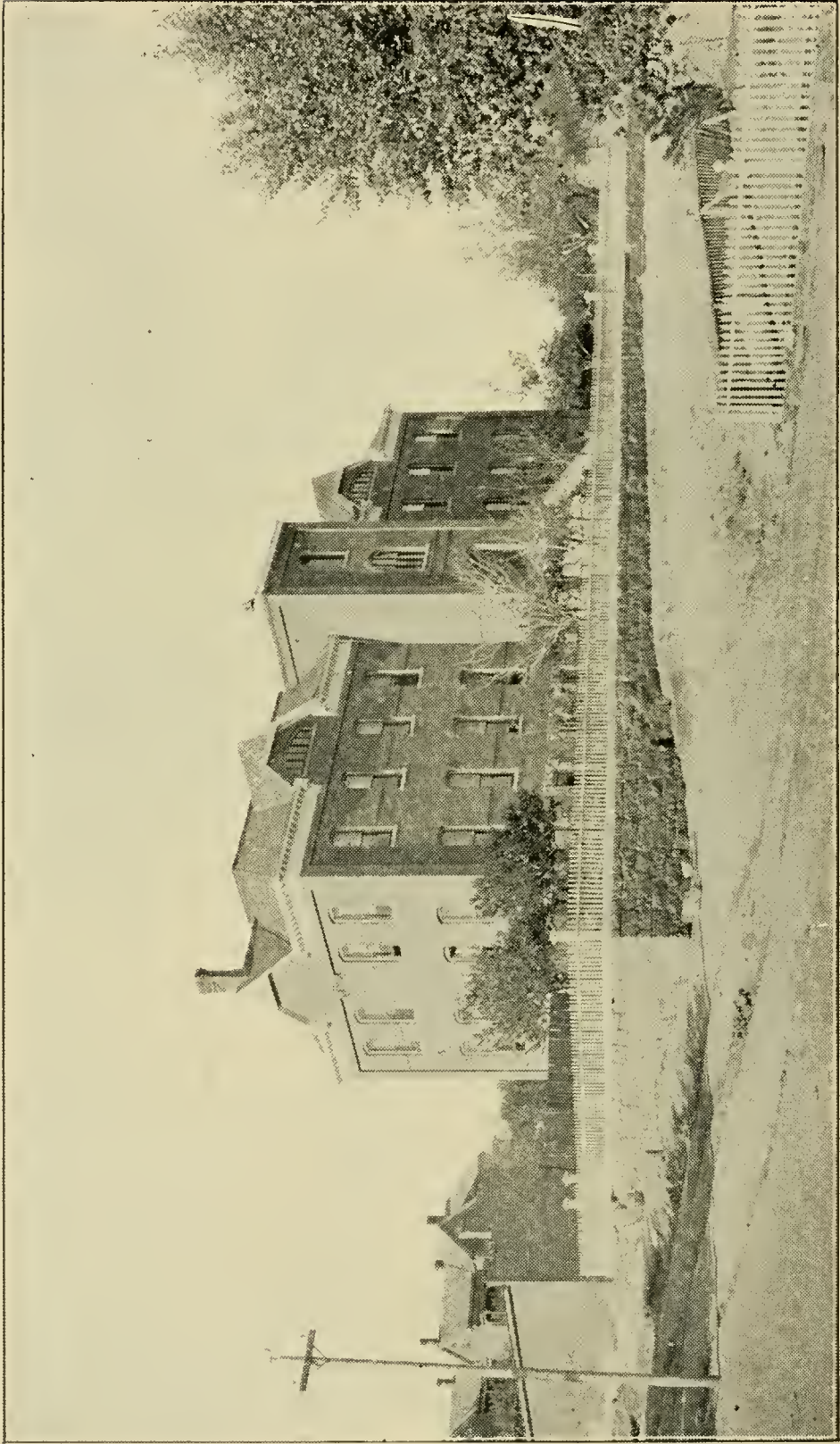
Next to agriculture, the stock industry is the greatest source of wealth, in fact, as far as the area devoted to it, it leads all other industries. This is easily explained, for besides an extensive private range, there are 50,000,000 acres of public range, and the climate is all that can be wished for by stock raisers. Many fortunes have been made in stock raising and with each year the grade of stock is being improved and thus becomes more valuable. Over 1,000,000 cattle are on the ranges of the Territory and in Chaves county are to be found some of the highest grade cattle in the United States, Herefords predominating. Chaves, Grant, Sierra, Luna, Otero, Doña Ana, Union, Leonard Wood, Roosevelt, Colfax, Eddy, Lincoln and Quay are the principal cattle counties.

Sheep.

There are between five and six million sheep upon the ranges. The mild winters, the grassy mesas and watered valleys, the sheltered canons, help to make sheep raising very profitable. The wool produced annually is between 20,000,000 and 25,000,000 pounds and as railroad facilities are ample there is no difficulty in getting the wool crop to market. A moderate capital invested in sheep, a home ranch and ample range will bring success to the sheep raiser if he possesses good business tact and experience.

Goats.

Equally as profitable and as free from difficulties is the raising of goats. Especially on the foothills and on the mountain mesas, goats do better than sheep. There are many thousand square miles of such pasture in the Territory. In Sierra, Lincoln, Otero and Santa Fe and other mountain counties, there are many large goat farms, much attention being given to high grade Angoras. Incidental to the profit from the hair of the Angoras, their skin and their meat, they will clear land from brush and thus make it available for irrigation. The goat is very hardy, can subsist upon a range that would starve any other animal and is free from diseases which often play havoc with other stock. There are, it is estimated, 225,000 goats in the Territory.



SISTERS OF MERCY HOSPITAL AT SILVER CITY.

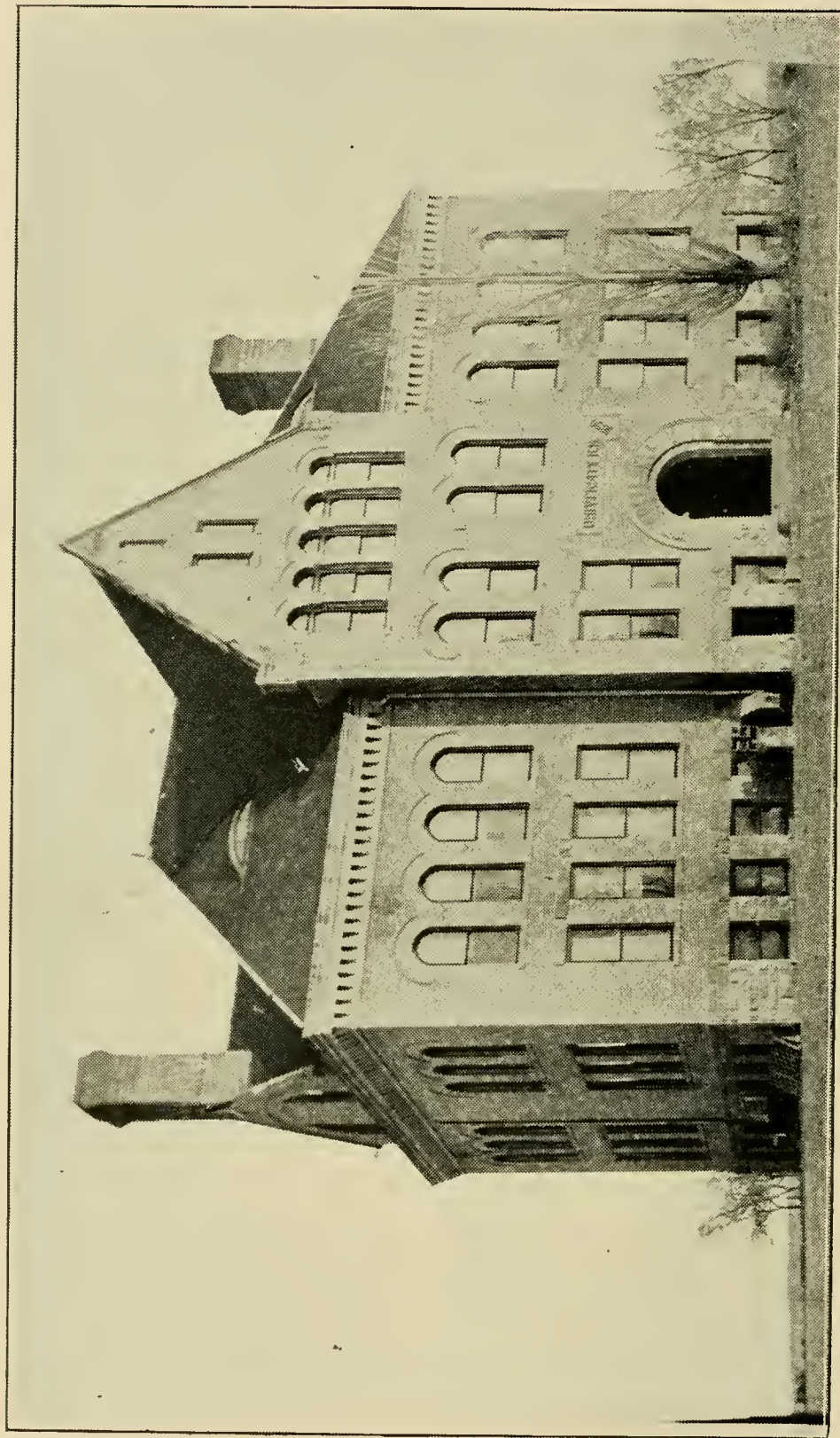
Timber.

New Mexico is rich in timber, about 5,000,000 acres being covered with merchantable timber. Extensive lumbering operations are at present being carried on in the Sacramento mountains in Otero county, there being extensive saw mills, tie preserving and planing mills at Alamogordo; in Rio Arriba county where a railroad is being built into the timber district; in Valencia and McKinley counties, where the American Lumber Company is carrying on operations upon a large scale, the lumber being sent to a large mill at Albuquerque; and upon a lesser scale in Taos, Santa Fe, Lincoln, Colfax, San Miguel, Mora and other counties. New Mexico timber, which is mostly pine, is used in building operations and for bridges and railroad purposes. Hundreds of thousands of pine and spruce railroad ties are also made annually.

Mining.

Mining will be treated in detail in a companion volume to this. It is one of the oldest and most important industries in the Territory and has produced many millions of dollars. It is destined to a great expansion and great production in the future. Prospecting has never been thorough nor development very extensive except in a few instances. Still, there have been many bonanzas in the Territory and from its gold and silver mines many fortunes have been made. Copper is found in almost every one of the mining counties, and the copper mines in Grant and Santa Fe counties are well developed. Considerable iron ore is mined in Grant county, but the Territory's iron deposits have scarcely been touched, although about 150,000 tons of iron ore are sent to Pueblo, Colorado, annually, from Fierro, Grant county, alone. The production of lead is, in importance next to gold, silver, copper and iron, and after that zinc ore figures in the mineral returns. New Mexico produces an extra fine quality of turquoise and supplies the market almost entirely in the United States. Other precious stones are found although not in large deposits.

Salt lakes, alum deposits, vast areas of gypsum, sulphur, kaolin, fire clay, corundrum, bloedite, ochre, graphite and mineral paints, are features of the mineral wealth of the Ter-



UNIVERSITY OF NEW MEXICO AT ALBUQUERQUE.

ritory. Marble, granite, sandstone, lime, brick clay and other building materials exist in many counties.

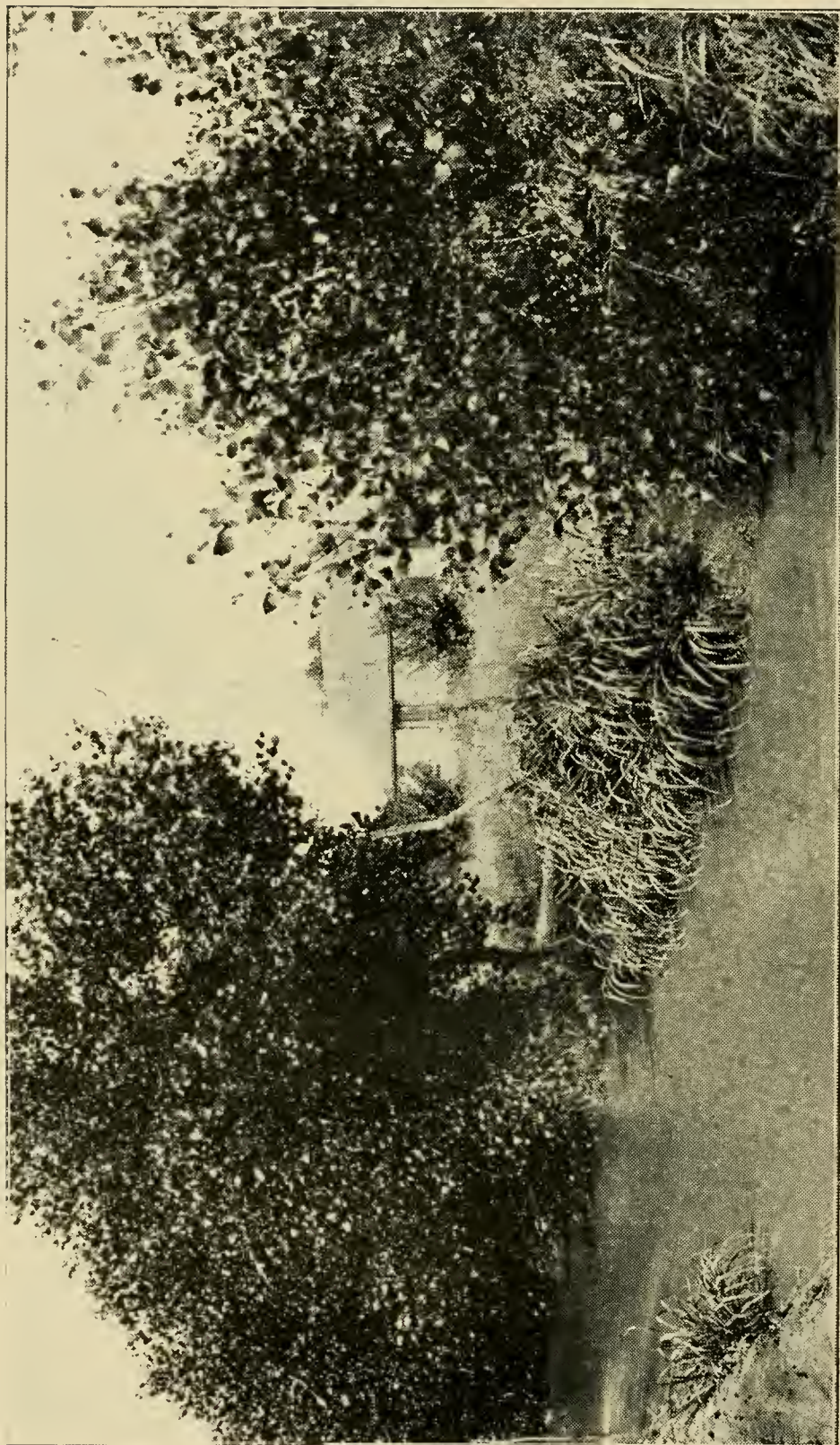
It is in its coal fields, however, that New Mexico possesses its greatest promise for the future. Last year a million and a half of tons of coal were produced by the coal mines at Dawson, Van Houten, Madrid, Gallup, Monero, Carthage, Capitan and elsewhere. Coal exists in more than one-half of the counties and undeveloped coal veins from four to forty feet in thickness await merely the coming of the capitalist and the railroad. Good coal miners can always find employment and make very good wages. There are also oil prospects in McKinley, Leonard Wood, Eddy, San Juan, Colfax and Sandoval counties.

The leading mining counties are: Grant, Santa Fe, Colfax, Taos, Rio Arriba, Sierra, Otero, Socorro, Lincoln, Doña Ana, Luna and Sandoval, although there are mines and mineral indications in every county.

Manufacturing Industries.

New Mexico has made but a beginning in manufacturing although it presents every possible advantage for large industrial enterprises. There are lumbering mills and a box factory at Albuquerque and at Alamogordo, and saw mills on various timber tracts; a woolen mill at Albuquerque; wool scouring plants at Albuquerque, Las Vegas, Roswell and Tucumcari; a foundry at Albuquerque; railroad shops at Albuquerque, Las Vegas, Raton, Alamogordo and Estancia; ore treatment plants in many of the mining camps; a tie preserving plant at Alamogordo and at Las Vegas, ice factories, steam laundries, and electric light plants in the larger towns, canneries at Las Cruces and Farmington, a distillery at Farmington, a cotton gin at Carlsbad, a brewery at Albuquerque and at Socorro, flour mills in the larger towns; coke ovens in the coal mining camps, a cement plant at Ancho; and other small manufacturing plants are gradually being established. At Estancia a salt treatment plant is about to be built.

But there is room for vast expansion, New Mexico producing wool, hides, cañaigre, cement, lime, sugar beets, gypsum and many other raw materials that many factories must ship from a distance. It offers in addition abundant and cheap fuel,

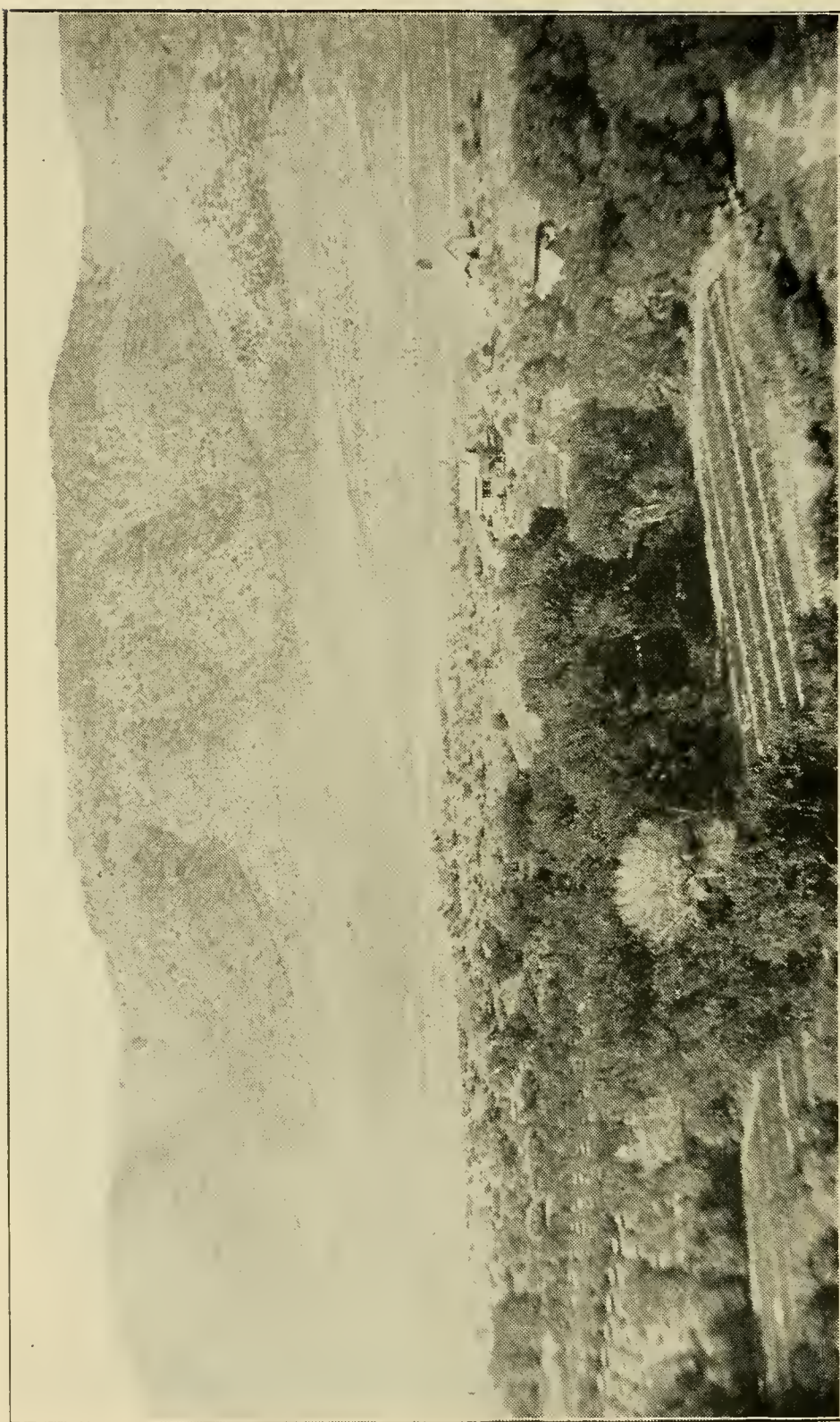


ON THE BLACK RIVER, EDDY COUNTY.

low priced land, natural power, a perfect climate, good home markets and proximity to Mexico markets, railroad facilities, moderate priced labor, all of which are factors in conducting a successful industrial establishment. By legislation, various branches of manufacture are exempted from taxes for the first few years after establishment, and the larger towns are always ready to tender every inducement to manufacturers who desire to locate. The opening is especially promising for woolen mills, tanneries, shoe, glove, furniture, paper and beet sugar factories, cement mills, glass works, canneries, distilleries, furnaces, iron and steel works and brick yards.

Railroads.

New Mexico is well gridironed by railroads and new lines are under consideration. During the past three years, 850 miles have been added and now every county except one, has railroad facilities. The Atchison, Topeka and Santa Fe, the Chicago, Rock Island and Pacific, the El Paso and Southwestern, the El Paso and Northeastern, the Santa Fe Central, the Denver and Rio Grande, the Colorado and Southern, the Pecos Valley and Northeastern, the Southern Pacific and their branches and extensions, are the principal railway lines. These railroads employ a large number of men, and afford superior facilities for communication and traffic within the commonwealth as well as connection with the outside world. Three of the most important lines of transcontinental travel pass through the Territory. Santa Fe and Deming have three independent railroad systems, while other places have a competition of two railroad lines or are the junction points of branches or a main and branch line.

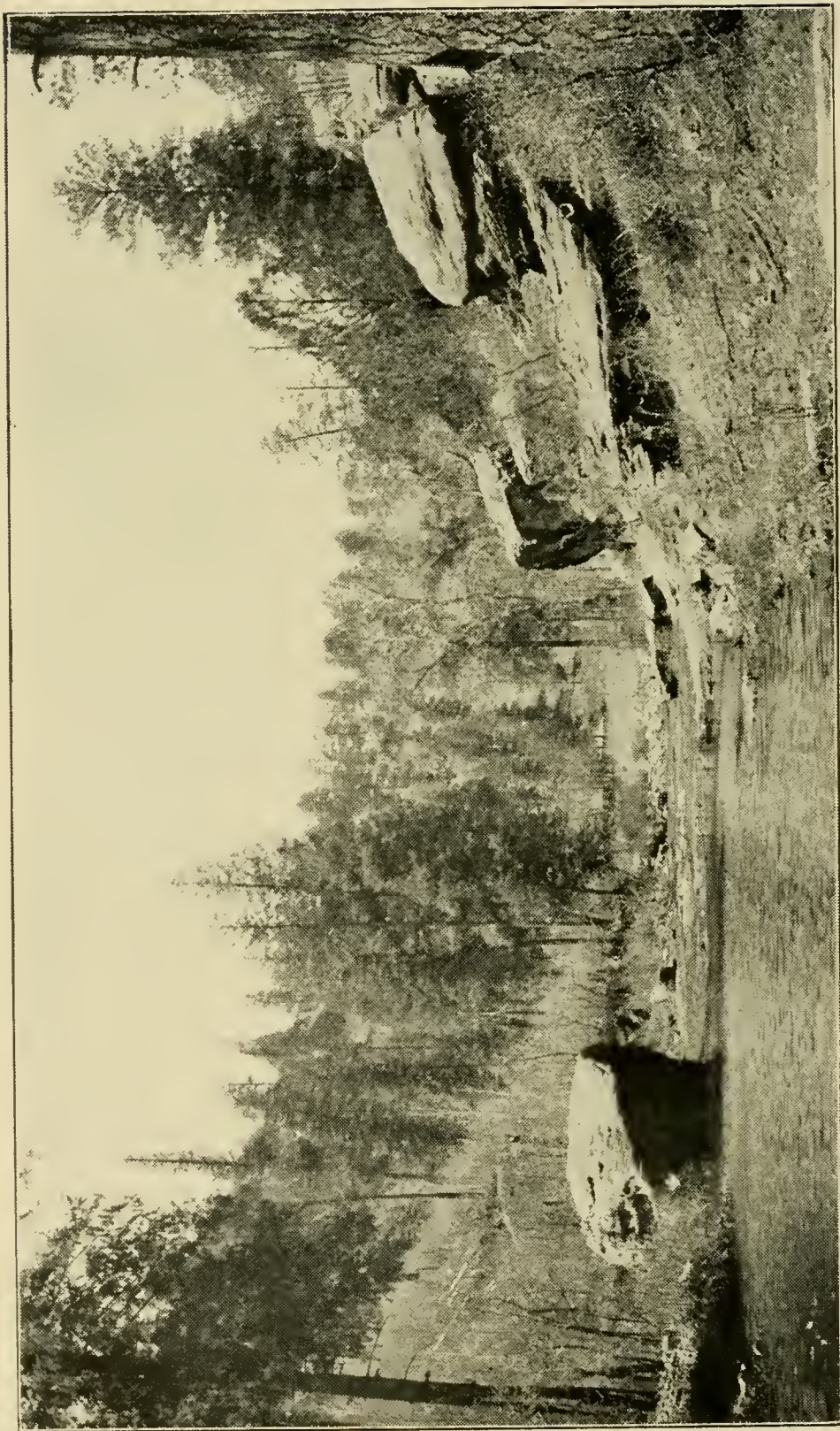


A VIEW IN THE UPPER MIMBRES VALLEY.

CHAPTER V.

CLIMATE.

IT is its climate that is New Mexico's principal and particular boast, and well may its people be proud of it. As the altitude gradually declines from 8,000 feet in the north to 3,000 feet in the south, the climate is modified as far as the mean annual temperature is concerned, but otherwise it is the same in the north as in the south, the sharp winter winds of the north being tempered by the warm sunshine and dry air; and the higher temperature of the south being moderated by the latitude, the dry air and the invariably cool nights. There is no other commonwealth, not even Colorado with its high winds and greater annual precipitation, nor Arizona with its hot dust storms and great variations in daily temperature, although both possess a fine climate that is a specific for lung trouble, that can compare its climatic advantages with those of New Mexico. The Territory knows of no cases of native consumption, and in the higher altitudes and in certain localities, of no enteric diseases, no malaria no diphtheria, no croup, no mosquitoes, no blizzards, no oppressive summer days or nights. At Santa Fe in winter, on sunny days, the temperature in the sun runs up from fifty to eighty degrees, and in summer the shade temperature never exceeds ninety degrees except once or twice in a decade, ninety-seven degrees being the highest temperature on record in thirty years. Even a temperature of ninety-seven degrees, on account of the great dryness of the atmosphere and the invariably cool summer nights, is not as oppressive as a maximum temperature of seventy-two degrees at Chicago or New York. At Carlsbad and Las Cruces the mean temperature for January is forty-two degrees and in July a little less than eighty degrees, giving the extremes of the mean temperatures for the year in southern New Mexico. The days of sunshine in every year average from 300 to 320, partly cloudy days from twenty-five to forty-five and cloudy days from twenty to thirty, there being more cloudy days in summer than in winter, and no other commonwealth in the United States has an average sunshine



TROUT SPRINGS NEAR LAS VEGAS.

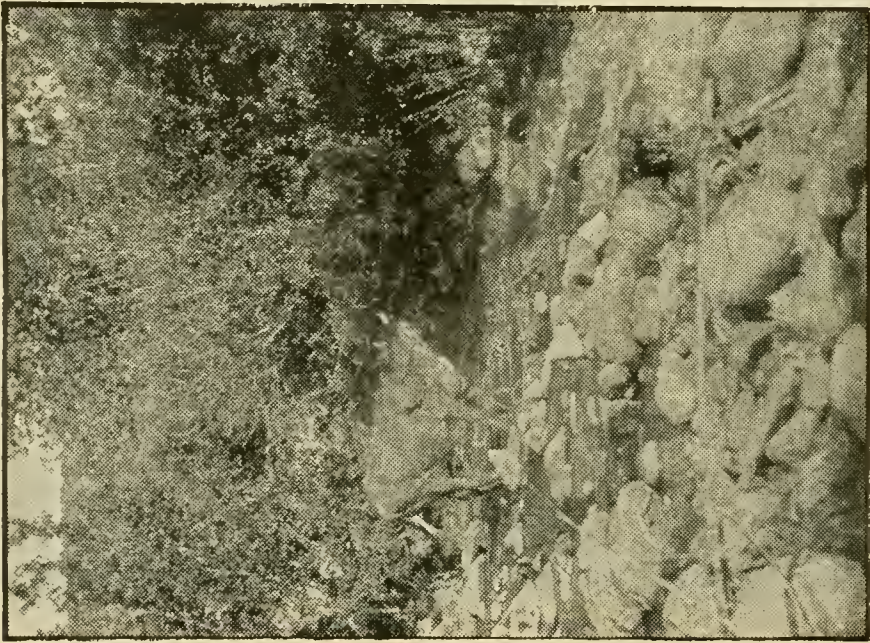
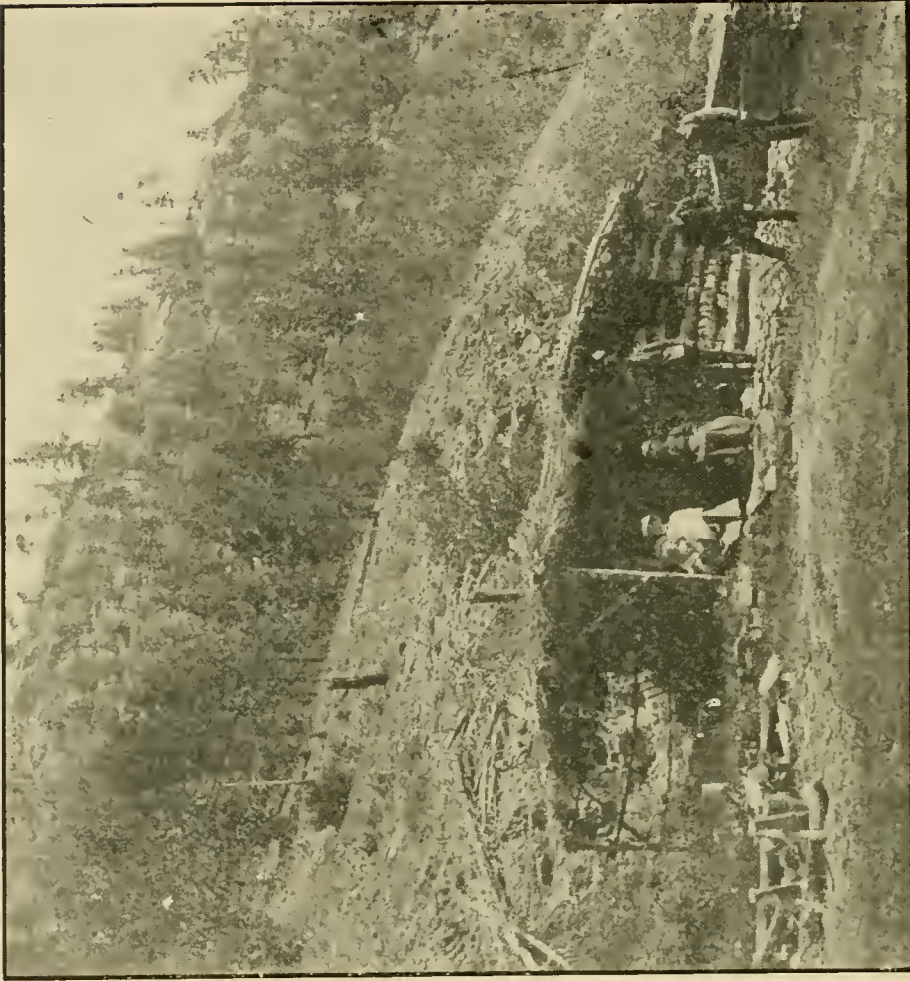
record equal to that of New Mexico, which, for that reason is known as the "Sunshine Territory." During the six months ending March 1, 1904, the weather bureau at Santa Fe recorded not a single cloudy day.

But it is not only to healthseekers that New Mexico is a haven of refuge. It has been stated by some writers that tuberculosis can be treated successfully in any climate. All experience is against such a conclusion. It has been demonstrated beyond question that certain sections of the United States possess climatic characteristics which are peculiarly adapted to the successful management of the disease. The so-called arid regions of the great southwest, which comprise portions of southern Colorado, all of New Mexico and Arizona, together with that part of western Texas known as the "Llano Estacado," may be included in this favored section. The vast and salubrious stretch of country, which is so many times alluded to as a "land of sand, sagebrush and cacti," possesses in an almost unlimited degree those very elements which observation has proved to be of the utmost value in the treatment of tuberculosis.

Where medicines have failed the elements are succeeding. A pure atmosphere, containing an abundance of oxygen and electricity, in conjunction with a large amount of sunshine, is today fulfilling in an eminently satisfactory manner the mission heretofore mapped out for such agents as cod-liver-oil, creosote and the various poisonous concoctions known as serums.

The importance of climate as a factor in the treatment of pulmonary tuberculosis is daily manifesting more and more its value, whether taken separately, or coupled with the various specific plans of therapy now advocated and employed in this important branch of practice. Physicians are informing themselves more widely upon this vital question, and the experiences gained by the practitioner living amidst such ideal climatic conditions as exist in New Mexico are being looked upon with more interest and kindly consideration than has heretofore been accorded them.

The consensus of opinion as expressed by the leading authorities on tuberculosis at the International Congress held at Moscow, Russia, two years ago, and later at London, Eng-



ON THE SANTA FE RIVER ABOVE SANTA FE.

land, and Madrid, Spain, was unanimously in favor of the climatic treatment of pulmonary tuberculosis over all other methods considered.

The southwestern section of the United States has thousands of residents who came as tuberculosis patients, some of them as long as twenty-five years ago. They are today, and have been for many years, in good health, have married and reared children who are to all appearances absolutely free from tubercular disease.

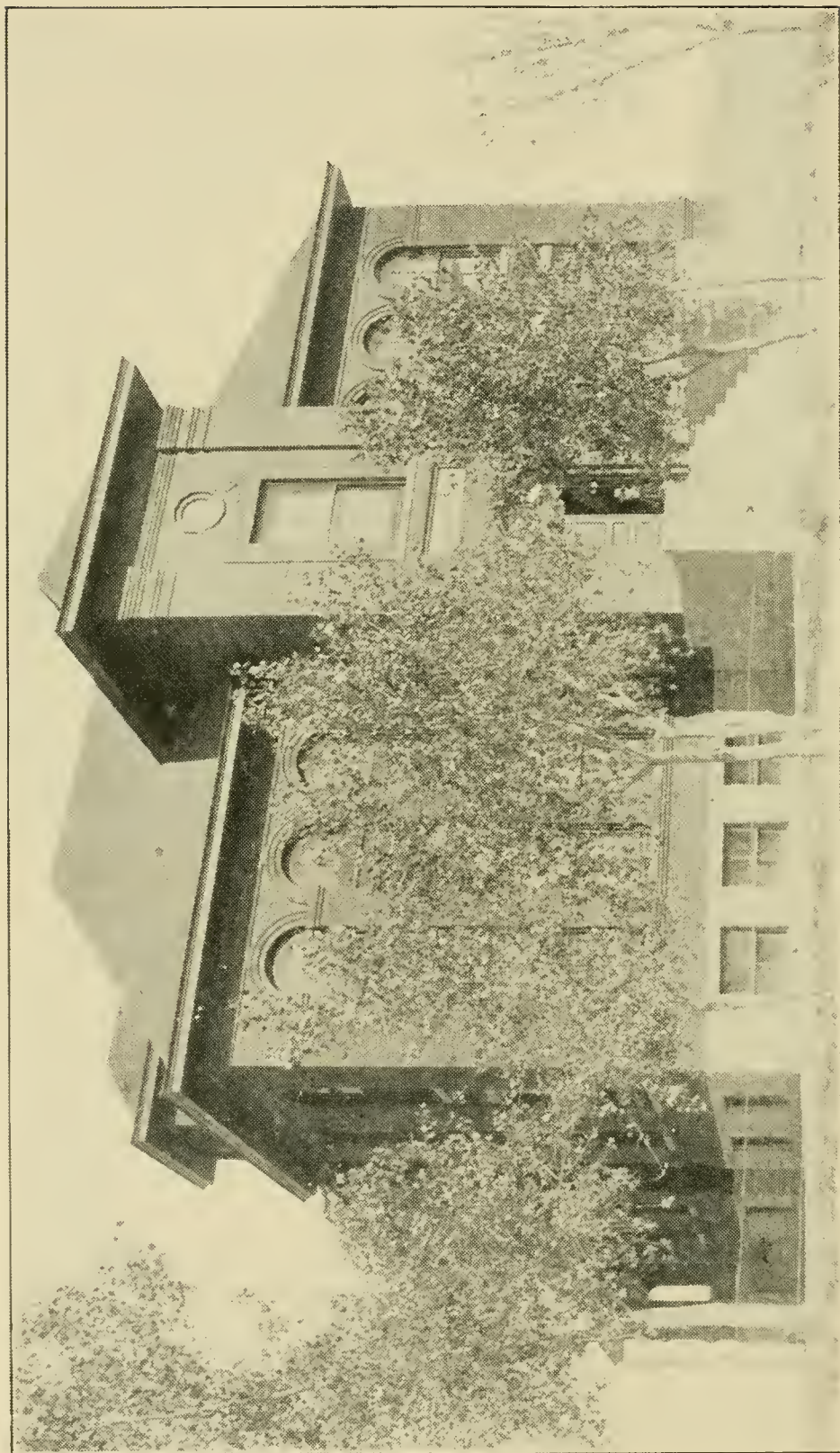
Animals, as well as the human race, are likewise remarkably free from tuberculosis in this region, as has been shown by the researches of Herrera and Lopez in Mexico, where the climatic conditions are practically similar to those existing in New Mexico. These investigators report that they have found but forty-five cases of tuberculosis in cattle out of 73,000 killed and examined at the government abattoir in the City of Mexico.

It may be stated in a general way that all specific plans of therapeutic treatment thus far suggested for the cure of tuberculosis, and especially of the pulmonary form, have failed, so that one must look to nature rather than to the laboratory for the weapons to combat this enemy of the race.

The early diagnosis of pulmonary tuberculosis is of the utmost importance for it is in the beginning of the disease that the greatest benefit is derived in the largest proportion of cases from the climate or the out-of-door plan of treatment.

New Mexico is essentially a "land of sunshine and blue skies."

Here there is a dry and bracing climate, with no extreme heat or cold, a climate, which for the most part, admits of an existence out of doors almost all the year round. It is these qualities of air and sky that have caused this favored region to be known today over the entire civilized world as the "Land of Sunshine." The peculiar adaptability of such a climate to the successful management of consumption and other diseases of the lungs and respiratory tracts is causing invalids to flock here in great numbers, experience and observation having demonstrated beyond further question the fact that the sea coast resorts have proved dismal failures in exercising either



HADLEY LABORATORY OF THE UNIVERSITY OF NEW MEXICO AT ALBUQUERQUE.

a corrective or retarding influence upon the diseases mentioned above.

The past few years the medical profession, as well as the laity, have been made aware, through various channels, of the vastly superior climatic conditions existing throughout the Territory of New Mexico, and patients are seeking relief here by the hundreds where formerly they came only by the score.

Osler says: "The requirements of a suitable climate are a pure atmosphere, an equable temperature not subject to rapid variations and a maximum amount of sunshine." Given these factors, and it makes little difference where a patient goes, as long as he lives an outdoor life. The purity of the atmosphere is the first consideration, and it is this requirement that is met so well in the mountains and the forests of New Mexico.

The problem of the prevention of the further spread of tuberculosis and its ultimate and complete eradication from the human race will be solved when physicians realize the importance of at once placing the patient suffering from, or threatened with, this disease in a suitable climate. Children inheriting this peculiar condition of the cellular structures and cell elements known as a tubercular tendency will develop, in a favorable climate, a cell antagonism to the disease which can never be acquired in a climate where tubercular diseases are more common and one which favors the causes that lead to tubercular disease.

It is generally conceded by writers upon bacteriology that climatic conditions play a most conspicuous part in both development and retardation of microbic life. Epidemic diseases which have for their vehicles certain conditions of the atmosphere, such as heat and moisture, constantly demonstrate their power of spreading contagion, the moisture contained in the air being the chief factor of preserving the vitality of the germ.

To any one familiar with the extreme climatic difference between the Atlantic coast states and the Southwest, the great role played by the climate in each locality named, will at once become strikingly apparent to the most indifferent observer. Epidemics, such as la grippe, so fatal and destructive in their train of sequelae, are unknown in New Mexico. This is rather remarkable, in view of the fact that the bulk of the population,

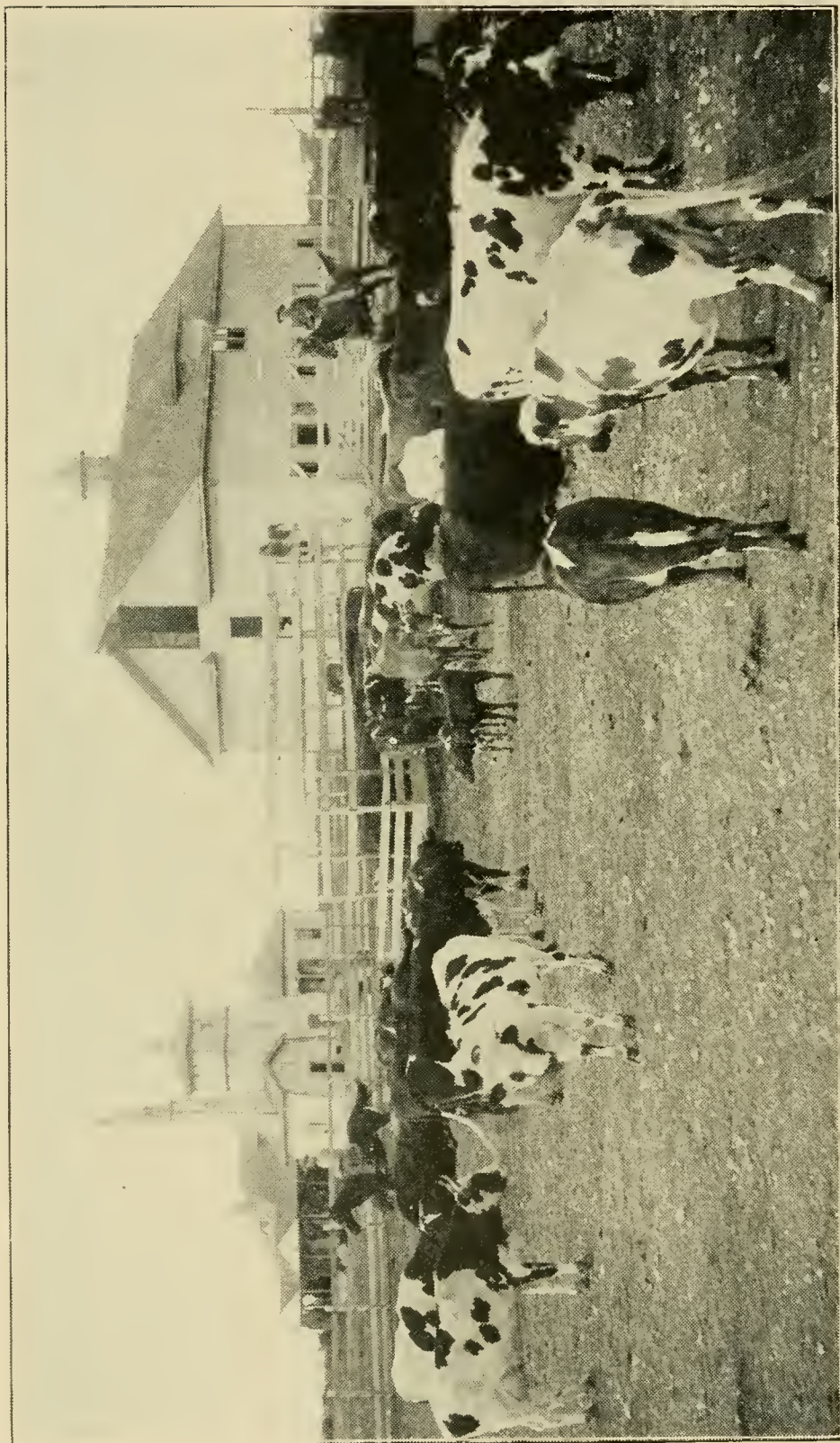


ESPIRITU SANTO LAKE, IN THE SANTA FE RANGE.

about three fourths, are native people, who live in a humble and primitive state scarcely ever employing any modern sanitary precautions to guard against epidemic invasions. The climatic conditions existing throughout the Territory and in the mountain regions more especially, the rarity and purity of the atmosphere, together with the almost constant direct rays of the sun, are the most powerful bactericides known to science today. A climate where discarded animal and vegetable substances undergo prompt and rapid desiccation after brief exposure to the atmosphere, without the least manifestation of decomposition, argues most strongly against bacterial development. The tuberculus bacilli lose their infective power in a very short time after exposure to the sun's rays in the arid atmosphere. This clearly explains the curative effect of climate upon pulmonary tuberculosis. Constant inhalation of what may properly be termed an aseptic atmosphere, in time, brings about in the pulmonary tissues, inflamed by tuberculous deposits, that very desiccation effected upon animal and vegetable substance exposed directly to the air.

Although there are many invalids, principally persons with tuberculosis, there is not a case of tuberculosis on record in New Mexico that was communicated from the diseased to the healthy through the medium of the atmosphere. That the native people of this section experience such wonderful immunity from tuberculosis, especially of the respiratory tract, must have its explanation in the very favorable climatic conditions surrounding.

In order to derive all possible benefit from such a climate as that of New Mexico the health seeker should live out of doors. If he has the strength to get about at all, the best he can do is to go into the pine forests and camp out. The nomadic life of the tent dweller is the best treatment for incipient pulmonary tuberculosis. It is often a grave mistake for an invalid to seek a change of climate in a place where he has no friends, no occupation, nothing to distract his mind from himself and his malady. In a few months he exhausts the possibilities of mere curious interest in unfamiliar surroundings, and then he strolls about alone or with chance acquaintances until he becomes weary of the town and the monotony of his existence. Home sickness ensues, the mental disease some-



ON THE BOLLES RANCH, NEAR CARLSBAD.

times counterbalancing the climatic benefit, and the health-seeker in desperation returns to his home, preferring the certainty of death among friends, to the possibility of a prolonged existence under unsupportable conditions. If such a health seeker would procure a saddle horse, pack animals, and a camp outfit and go into the mountains with a good guide and agreeable companions he would find no monotony, and no homesickness, but would gain strength and buoyancy of spirit and never know a dull hour. A year of out-of-door life in the dry, bracing air of New Mexico, will arrest many a case of incipient pulmonary tuberculosis, if the sufferer has the necessary strength and vitality to begin such a course of treatment and takes ordinary precautions against undue exposure and overexertion.

Recognizing the superior climatic advantages of New Mexico for the treatment of diseases of the respiratory system, the United States government has established, and now has in successful operation, two large sanitariums, one operated under the auspices of the War Department and the other under the United States Marine Hospital Service.

The action of the government in establishing its great sanitariums for the treatment of consumption in New Mexico is a far greater and stronger eulogy on the climatic advantages of this Territory than anything that can be said or written upon the subject.

Since the establishment six years ago of the two government sanitariums, one at Fort Bayard, and the other at Fort Stanton, several hundred soldiers and sailors, afflicted with tuberculosis, have been cured by the climatic treatment, which is the chief feature at both of these establishments. Liberal appropriations have been made by the national government for enlarging and improving both of these institutions, and they are destined to make a record in the future by the large and increasing per cent of cures they are effecting. Fresh air in abundance, both night and day, is the first and most important factor in the treatment. Coupled with this are sunshine, healthful and abundant diet, moderate exercise, amusements and recreations of a suitable character. This constitutes the plan followed at both places, and they are proving



COURT HOUSE OF EDDY COUNTY, AT CARLSBAD.

each day the immense advantages they possess over the old methods of treatment.

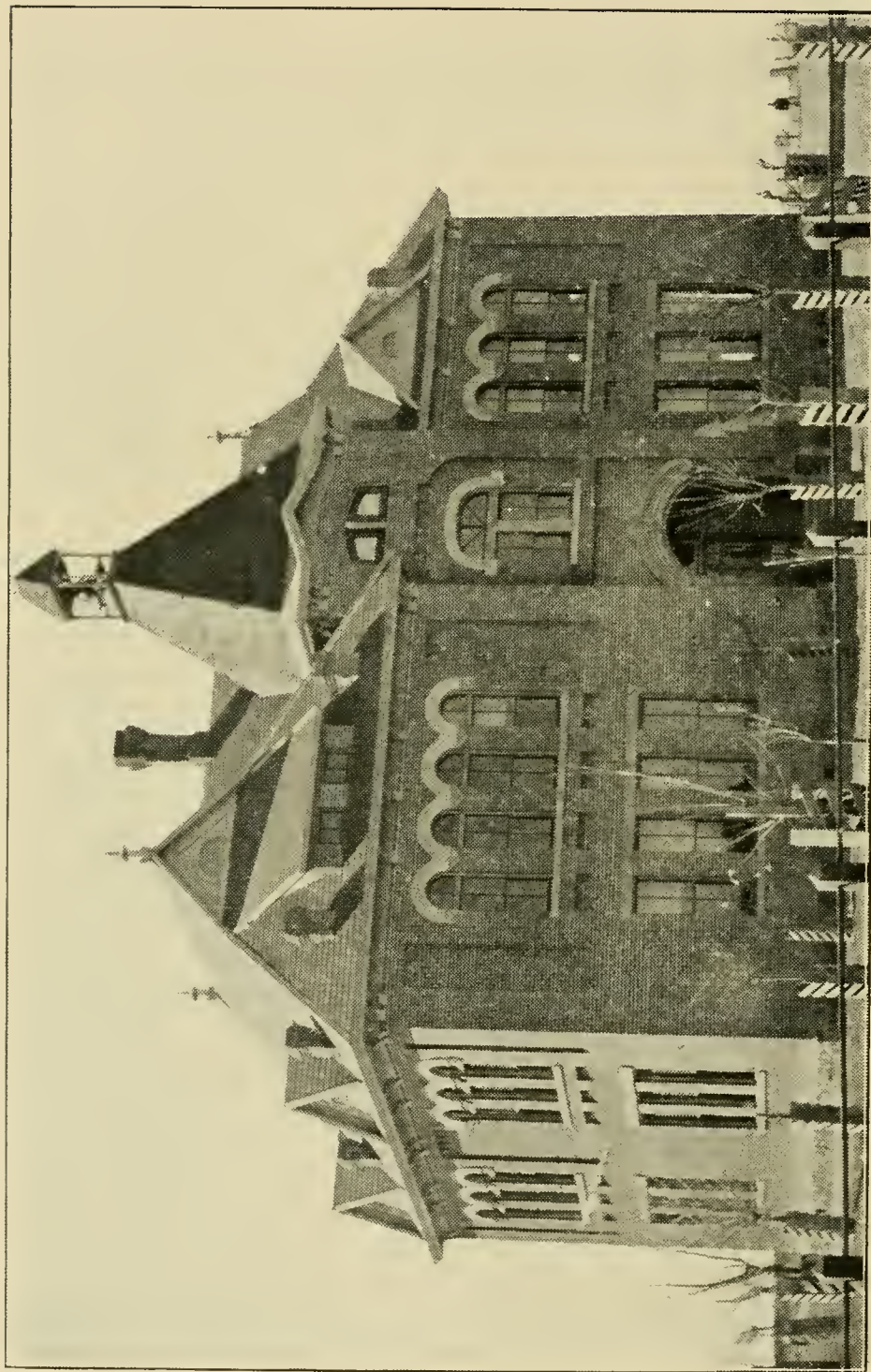
Private sanitariums are rapidly springing up and this is a sure indication that at last capitalists as well as scientific men are beginning to admit in a practical way that the future of New Mexico has great possibilities in this respect.

At Santa Fe, Albuquerque, Las Vegas, Silver City, Las Cruces and other points, are now in successful operation excellent sanitariums conducted by private individuals. Add to these the various mountain resorts and springs where camp life is a feature, it will be readily seen that at the present time much excellent provision is already made for health seekers, whereas only a few years ago, everything of this kind was extremely crude. Special attention is given at all these places to making the dietary varied and wholesome. This with abundant sunshine and pure mountain spring water, constitutes a trinity hard to surpass in the treatment of consumption.

"Sunmount," beautifully situated in the foothills east and south of Santa Fe, is the pioneer tent city of this region and the most important. Great care in the selection of the site has repaid the managers, as the demand for accommodations increases daily. The "Holmes Sanitary Tent" is in use there and its construction is so ideal for the purpose that it permits of a comfortable life in the open air during the entire year. Grand scenery, constant sunshine, pure water from mountain springs, a generous cuisine, competent medical supervision, trees with health-giving properties, like the spruce, cedar, pine and the Australian red gum or eucalyptus, together with the altitude of 7,000 feet, and the pure mountain air form an ideal combination of health and life giving-elements not to be found elsewhere, perhaps, on the continent. "Sunmount" is surely destined to become the most noted health and pleasure resort in the entire southwestern country. A common mistake about this country is that it is a very expensive place to live in. At "Sunmount" excellent tents comfortably furnished are to be had at \$10 and \$15 per month.

Charles E. Linney, director of the United States Weather Bureau at Santa Fe, speaks as follows of the New Mexico climate:

"It is easy to say that the climate of this or that place is the



PUBLIC SCHOOL BUILDING AT DEMING.

finest in the world; it is less easy to show reliable facts and figures to bear out the statement, and it is least easy to convince the self satisfied public that some other spot can be, or is the more favored: facts, however, if they are facts, should be given credence.

"It is with these barriers in view that a few facts (and simple figures) regarding the climate of central and northern New Mexico are presented, this vast empire being in many respects nicely typified by Santa Fe, local contour, latitude and altitude being considered.

"Discarding fractional finesse, the annual mean temperature of Santa Fe (obtained from 31 years of carefully compiled records by the United States Weather Bureau) is 40° , a degree higher than that of Chicago, the same as that of Boston, a degree lower than Denver, six degrees cooler than Asheville, North Carolina, (which has the same latitude), seven degrees cooler than St. Louis and 20° cooler than Jacksonville. This comfortable average too is the result of balancing 29° , the coldest month (January), with 69° , the warmest month (July). In 31 years the temperature has never risen to 100° , the highest record being 97° in the month of August, 1878, and since the following year it has not touched 95° ; the average number of days each year with 90° or higher is but two. The average daily maximum temperature (afternoon reading) of the warmest month (July) is but 81° , while the average night temperature of this month is but 57° , a summer temperature far more comfortable than that of St. Louis, Washington, New York, Boston, Chicago, Denver or St. Paul, and only approached by the cities that nestle beside the frigid waters of Lake Superior.

"On the other hand, winter is not bleak and cold; the average winter temperature is 31° , just below the freezing point. The temperature of the night falls to or below freezing a little over one hundred times each year, while zero temperatures are rarely recorded. The lowest actual record is 13° below zero in December, 1879, and in January, 1883; many winters pass without a record of zero temperature.

"The annual precipitation (including rain, snow, sleet and hail) is 14.3 inches; Denver the same; Chicago, 34.8; St. Louis, 41.1; Asheville, 42.5; Washington, 44.8; Boston, 45.0, and Jack-

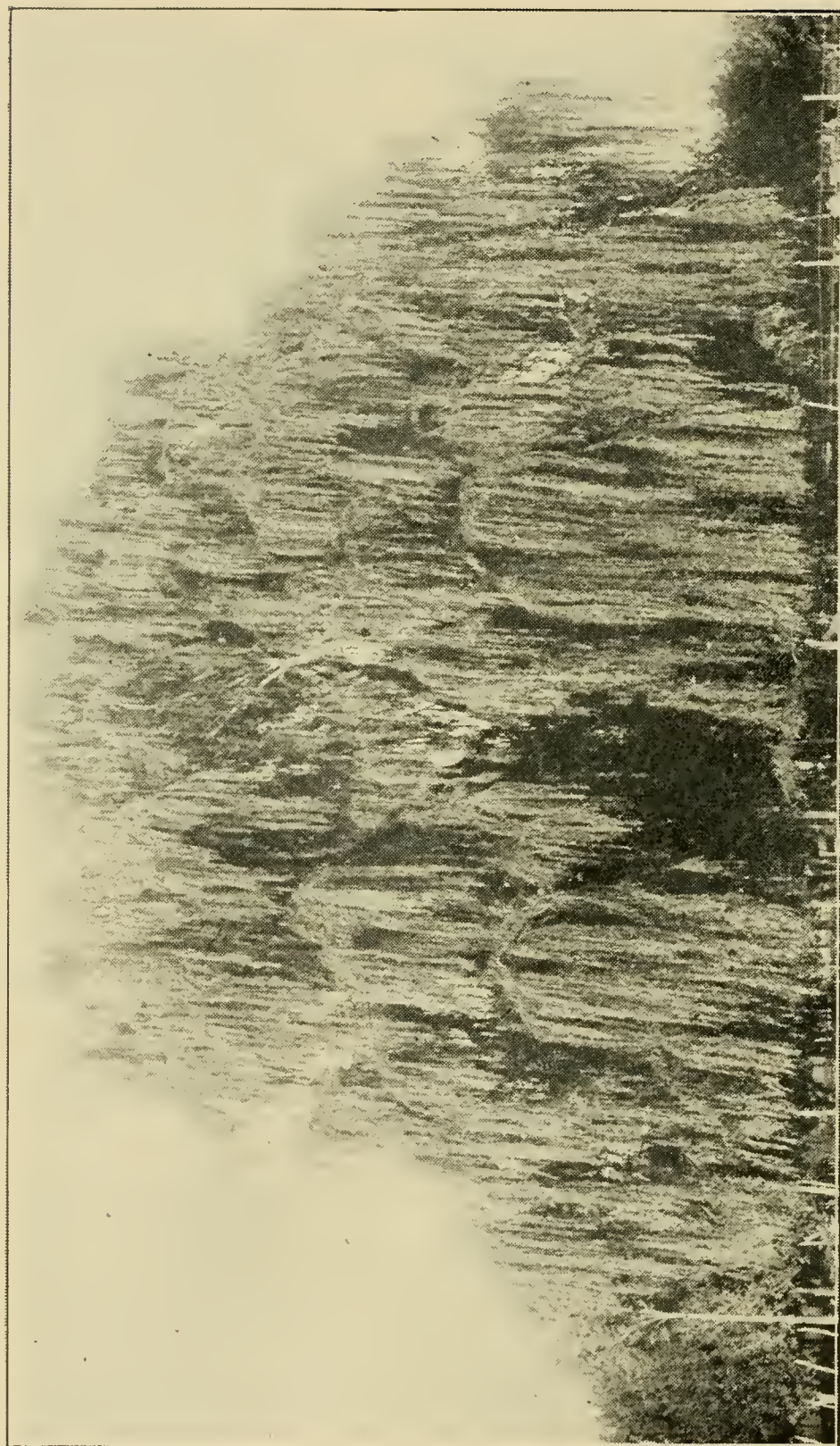


WHERE SILENT WATERS FLOW IN AN IRRIGATION CANAL IN SANDOVAL COUNTY.

sonville, 54.1 inches. While the rainfall is low it should be borne in mind that 62 per cent of the amount occurs in the spring and summer months, leaving the fall and winter months dry and invigorating. July is the wettest month, averaging 2.8 inches, while but 0.7 inch (or less) are measured in November, December, January, February and March. The average number of days with 0.01 of an inch or more of precipitation is 81, against 111 at St. Louis, 120 at Chicago, 121 at Boston, 122 at Washington, and 127 at Jacksonville. These figures for Santa Fe, however, do not represent days with continuous rain, but rather days with showers of short duration, for a day with continuous rain is practically unknown.

"The sunshine of Santa Fe is proverbial; there is annually recorded 76 per cent of the possible amount, against 69 per cent at Denver, 65 per cent at St. Louis, 59 per cent at Washington, 54 per cent at Boston and 53 per cent at Chicago. With all of these cities, excepting only Denver, the greatest amount of sunshine occurs in summer, while here the highest percentage is in the fall, spring and winter in the order named—expressed differently this means that there is a partial veiling of the sun's rays during the heat of the summer, but a full and free bestowal of its glorious rays during the remaining nine months of the year. Occasionally, the amount of sunshine reaches the marvelous total of 93 per cent of the possible (June, 1902), and it has never fallen below 55 per cent (January, 1898). In actual hours of sunshine the record averages 3,352 hours in a year, 9.2 hours for each day.

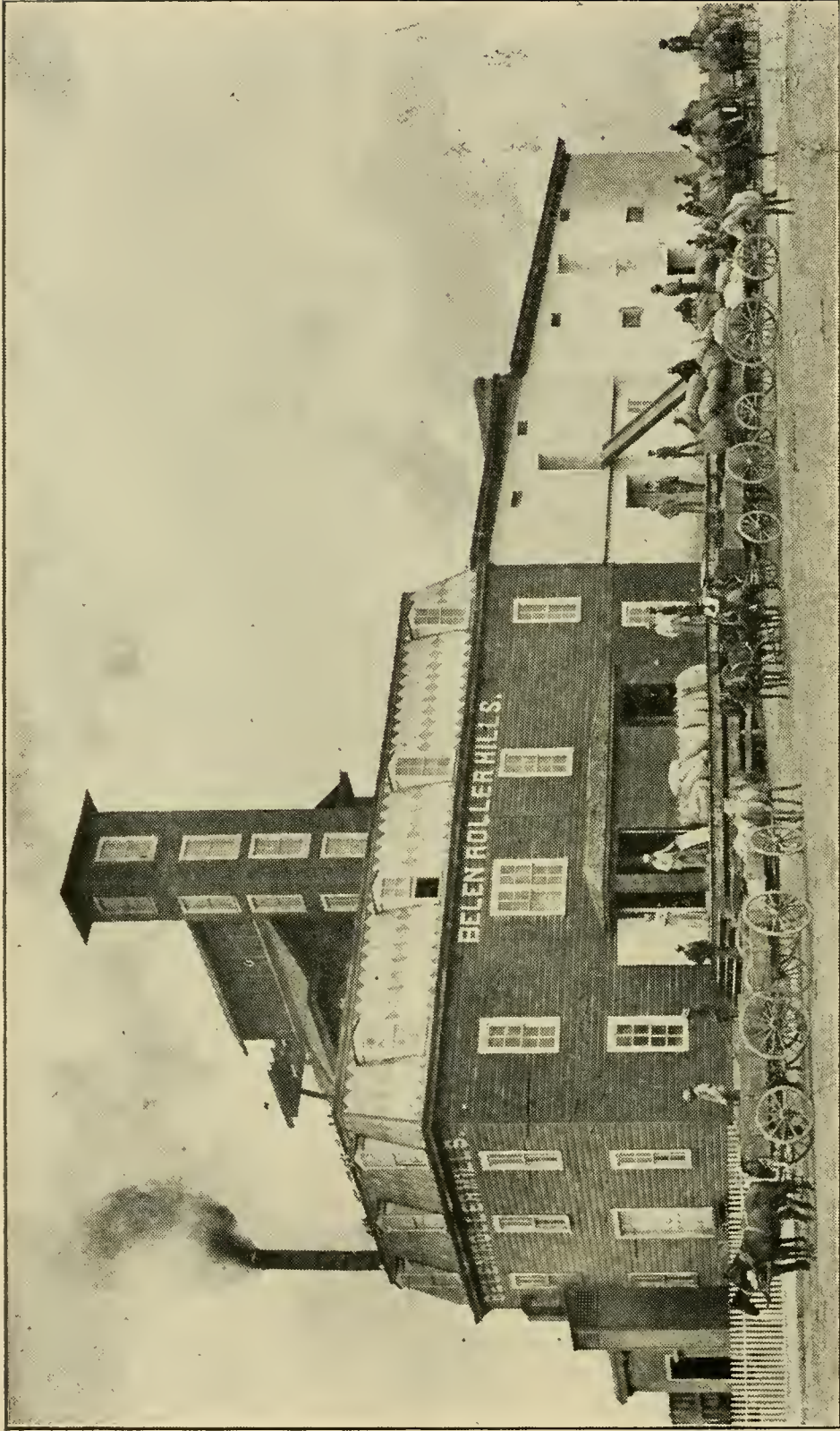
"The average relative humidity is slightly below 46 per cent, it is highest, slightly below 55 per cent, in January, and lowest 33 per cent in June. The annual relative humidity at Denver is 50 per cent; at St. Louis 70 per cent; at Boston 72 per cent; at Washington 73 per cent; at Chicago 77 per cent, and at Jacksonville 80 per cent. For the warmest months of the year—June, July, August and September—the average at St. Louis is 66 per cent; Chicago and Boston 74 per cent; Washington 75 per cent and Jacksonville 82 per cent; in other words the humidity during the heat of the summer in the eastern cities is considerably greater than the annual average, while just the opposite condition prevails in Santa Fe, where it is a dry heat, thus always free from enervating effects.



WEeping WILLOW NEAR BERNALILLO.

“The average hourly wind movement is low (6.9 miles per hour) and it is rare indeed that a storm velocity (40 miles an hour or higher) is attained, there being but 37 such records in 21 years. There is no record of the wind ever having attained a velocity of 60 miles an hour at Santa Fe.

“Summarized, the climate may be described as one that is mild and equable, much given to sunshine, free from great heat, high winds, humidity, and debilitating effects so noticeable in the central and eastern cities, free also from the cold and snow and storm of other northern cities, a climate of clear skies, small rainfall, few storms and those of short duration, one which is usually warm in the sun in winter and cool in the shade in summer.”



FLOUR ROLLER MILL AT BELEN.

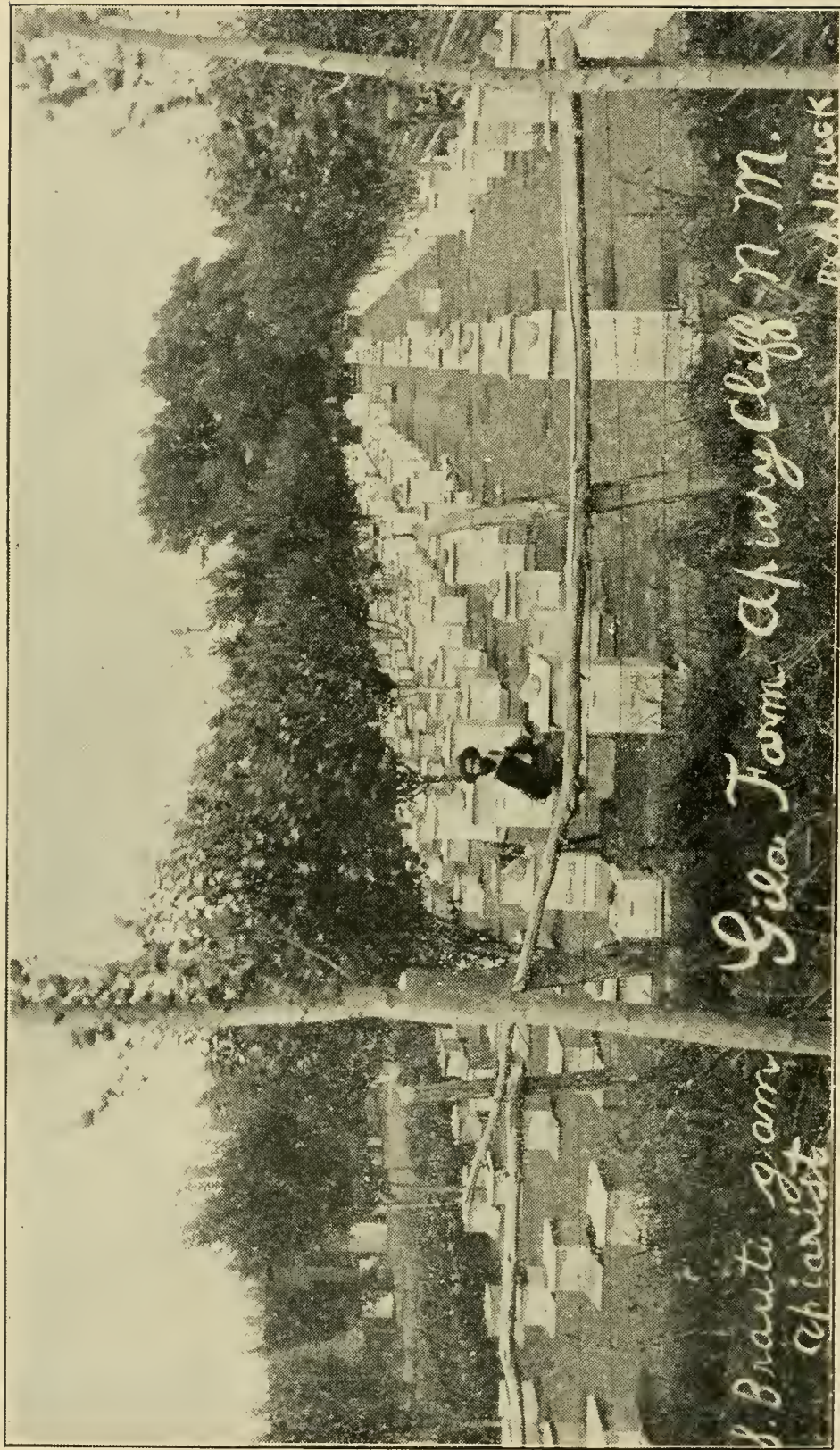
CHAPTER VI.

MINERAL AND HOT SPRINGS.

NEW MEXICO is not only blessed with a climate that is a boon to health seekers, but it also possesses mineral and hot springs whose waters have curative powers that are wonderful. One of the most remarkable groups of thermal springs in the United States is located at Ojo Caliente, Taos county, 6,290 feet above sea level. There are three large hot springs, whose curative powers were recognized before the white man entered New Mexico. The temperature of the water ranges from 90 to 122 degrees Fahrenheit and their gases are carbonic. The waters contain 1,687.34 grains of alkaline salts to the gallon, and the springs are therefore considered the richest alkaline hot springs in the world. Associated with the hot springs is a lithia spring especially effective in the cure of kidney troubles. Ojo Caliente is reached by a short stage ride from Barranca on the Santa Fe-Antonito branch of the Denver and Rio Grande Railroad.

At Las Vegas Hot Springs, 6,767 feet above the level of the sea, six miles from the City of Las Vegas, is a group of hot springs, whose waters resemble those at the famous hot springs at Teplitz, Austria, although its two chief active constituents, carbonate and sulphate of sodium, recall the waters of Carlsbad. The hottest of the springs is 144 degrees Fahrenheit. The mineral elements vary from the saline to the lithia and sulphur. The waters are conveyed by pipes into the bath houses and natatorium, and stimulate the digestive organs into activity, being especially potent in stomach disorders, intestinal troubles, liver complaints, kidney trouble, gout, diabetes and kindred ailments. The magnificent Montezuma Hotel at the springs is to be reopened in 1905. The hot springs are reached from Las Vegas by electric railway.

Two groups of hot mineral springs are located in the Valles mountains, fifty miles west of Santa Fe, and accessible from Santa Fe, Albuquerque and Espanola by good wagon roads. The altitude of the lower springs is 6,620 feet and of the higher



Geo. Form Apiary Cliff N.M.
P. A. J. BUCK

S. Branti gam
Apiarist

AN APIARY ON THE GILA RIVER.

group 6,740 feet. The waters of the largest of the lower springs have a temperature of 168 degrees, running about fifty gallons per minute, with escaping carbonic acid gas and deposits of white carbonate of lime. There is also a spring of 130 degrees with free carbonic acid and red brown deposits; a spring of 119 degrees with sulphuretted hydrogen and iron. The waters of the other springs in the group range from 102 to 108 degrees and carry sodium, lime and magnesia. These springs are very efficacious in rheumatic complaints. The upper group consists of forty-two springs, whose waters range in temperature from 70 to 106 degrees. They flow from caves of carbonate of lime. The springs contain 27.26 parts of solids in 100 parts of water, mostly chloride of sodium and sulphate and carbonate of soda, lime and magnesia and resemble the famous springs of Marienbad, Europe. Besides the hot springs north of the upper group, are numerous cold springs. Hotel accommodations are provided at these springs.

The mineral springs at Carlsbad, Eddy county, have the largest flow of any mineral springs in the southwest. They pour forth 5,000 gallons of mineralized water a minute, whose constituents are almost identical with those of the Friedrichs-hall spring at Carlsbad, Austria, the waters being invaluable as an aperient and alterative. Plans have been perfected for the erection of a sanitarium and hotel at the springs. The beautiful town of Carlsbad, nearby, however, furnishes good and convenient accommodations for all visitors.

At Faywood, Grant county, three miles from Faywood station on the Santa Fe railway, are springs of 142 degrees Fahrenheit and which are efficacious in cases of rheumatism, stomach and kidney troubles, and blood and skin diseases, the waters resembling those of Carlsbad, Austria. The altitude of the springs is 5,782 feet. A commodious hotel has been erected at Faywood. Three miles north of the hotel, is another group of mineral springs.

The Coyote mineral springs, twelve miles from Albuquerque, are highly esteemed for their curative powers. They are mildly laxative and diuretic and are specific in gout, rheumatism, dyspepsia and kidney and liver troubles. On the other side of the Sandias, on the Tejon grant, are also fine mineral springs but not yet exploited.



IN THE GALLINAS CANON NEAR LAS VEGAS.

Near Folsom, at an altitude of 6,500 feet, on the Colorado Southern Railroad, are hot springs of great medicinal value. Nearby is the extinct volcano Capulin, with one of the most perfectly formed craters in the southwest.

Ten miles southwest of the quaint old Pueblo of Zuni, and further south on the San Francisco river, are hot and mineral springs, known and used by the natives for the past three centuries and longer.

At an altitude of 6,540 feet, in Socorro county, at Cherryville, accessible by stage from Engle, there are hot mineral springs, with a temperature of 120 degrees. At Palomas in Sierra county, on the Gila river in southwestern Socorro county, on the upper Mimbres in Grant county, and in other parts of New Mexico are found hot and cold springs, whose curative powers are equal to those of the springs described above, and situated in canons or valleys of wild but idyllic beauty. Near Estancia, in Valencia county, are very strong alkaline springs; a mile southeast of Santa Fe are the Aztec mineral springs; eight miles west of Santa Fe is a mineral spring reported to be the equal to the famous soda spring at Manitou, Colorado. At Wamsleys, Taos county, are fine hot mineral springs whose waters have effected cures that border on the miraculous, and the waters of the artesian well at Springer are mineralized and are bottled for trade.

This is only a list of the better known and most accessible of the hot and mineral springs in New Mexico, whose healing waters have stood the test of time, and it is not uncommon to have people come a thousand miles or more to take advantage of their curative powers.



ON THE SCENIC ROUTE ROAD NEAR SANTA FE.

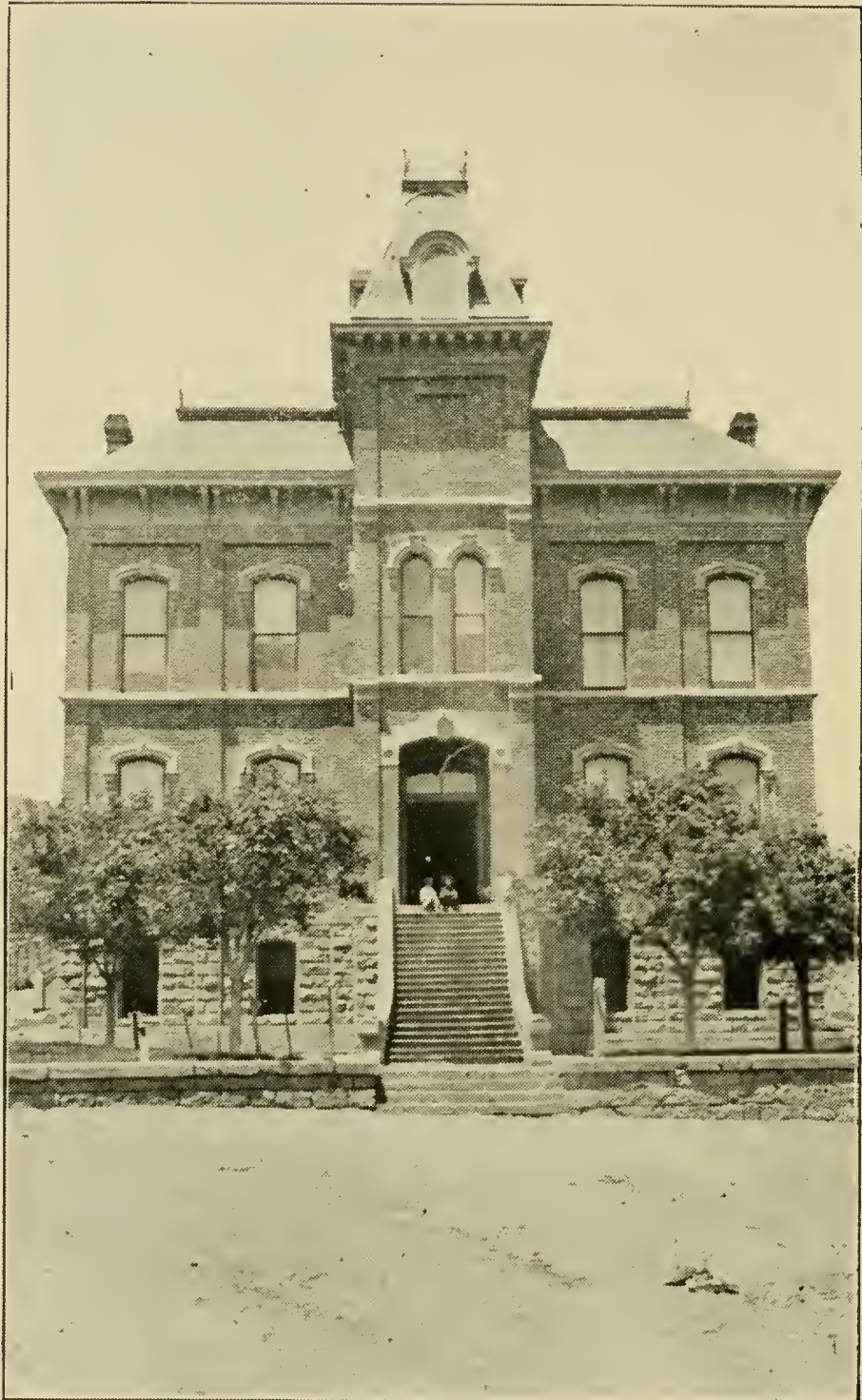
CHAPTER VII.

ATTRACTIONS FOR TOURISTS.

NO other commonwealth is as rich as New Mexico in prehistoric remains and historic landmarks. In the Pajarito Cliff Dweller's Park, twenty miles west of Santa Fe, are twenty thousand cliff dwellings and ruins of communal buildings, some of which had as high as 1,200 and more rooms. They are of two kinds :

1. Cliff dwellings proper. These are houses built on high ledges under overhanging cliffs. They are closely allied to the ancient style of pueblo ruins. In these the back walls are formed by the natural cliffs, while the front and partition walls are of masonry, consisting of rudely dressed stone laid in adobe mortar and chinked with smaller stones in a manner almost identical with that of the Pueblo ruins.

2. Cavite lodges. These dwellings are usually high and in many cases are in almost inaccessible cliffs. In the earliest stages they consisted of natural caves, but with the development of the people occupying them, these dwellings were improved. In their highest stages of perfection, they consisted of wholly artificial caves in perpendicular cliffs. A doorway is hewn into the face of the cliffs to a depth of from three to five feet. Then the excavation of the dwelling began. A front room, circular, oval or rectangular was dug out. It may be from six to twenty feet in diameter according to the use for which it was designed. If for a sleeping room only, it is liable to be from six to eight feet in diameter, with low ceiling often not over four feet. If designed for a kiva, it may attain to a dimension of fifteen to twenty feet in diameter, with higher ceilings. Those designed for general living rooms are usually from eight to twelve feet in diameter, with ceilings not over six to seven feet above the floor. There are usually one or more smaller rooms connected with the main living rooms by very small doorways. These were probably used for storage. The interiors are generally plastered to a height of about four feet above the floor with adobe mortar. In some places there



COURT HOUSE OF GRANT COUNY AT SILVER CITY.

has been considerable attempt at wall decorations. The outer doorways are small, often not to exceed one and one-half by four feet.

Pueblo ruins. These are spoken of as Pueblo ruins not because they have been occupied by the Pueblo Indians in historic times, but because of their resemblance to the large terraced structures occupied by the living Pueblo people. The finest specimens of this class of ruins in existence are to be found in New Mexico, being very numerous in several parts of the Territory. They are built of sandstone, volcanic tufa, lava and cobble stones, the material used in their construction depending upon the natural formations found in the vicinity where located.

The Pajarito Park is a tract embraced between the Rio Grande on the east, the Jemez mountains on the west, the Rito de los Frijoles on the south, and the Chama river on the north. It is a park of great natural beauty, being for the most part a plateau of from 6,000 to 9,000 feet altitude, and cut by deep canons. The western portion attains an altitude of over 10,000 feet in places, and is covered by a heavy growth of pine and spruce. A considerable part of the tract is underlaid with volcanic tufa varying in thickness from fifty to one thousand feet. In the northeastern part this is entirely eroded away. Throughout the north central section the tufa remains in long tongue-like mesas or potrereros, which rise abruptly—in many places perpendicularly—to a height of from 100 to 150 feet. In the southern part, the tufa extends to the Rio Grande in a sheet of varying thickness, and here innumerable canons are cut out by the mountain torrents. The face of the country thus presents many miles of almost perpendicular cliffs of yellowish and orange colored tufa, and in these are found the cliff dwellings.

This is one of the richest archaeological fields on this continent. Many thousands of cave dwellings have been explored, the largest of the communal houses have been examined and mapped. Hundreds of smaller stone ruins have been located and sufficiently investigated, and a small beginning has been made in burial mound exploration. Another interesting line which promises good results is that of photographing and sketching the pictographs or rock writings of the prehistoric



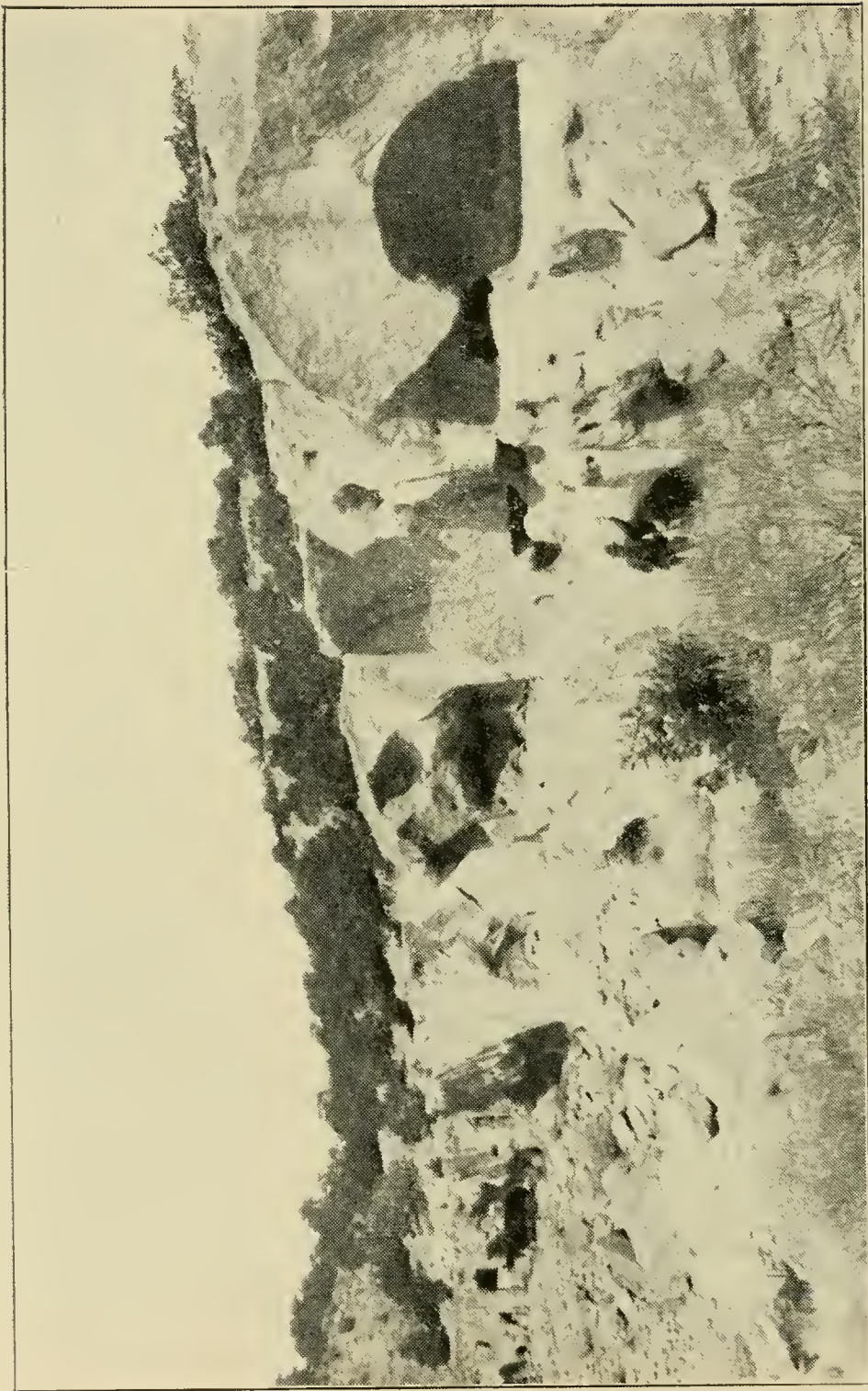
ARTESIAN WELL AT ROSWELL.

inhabitants. These inscriptions are evidently the work of tribes far more remote than the immediate progenitors of the Pueblos, who occupied these dwellings in comparatively recent times, that is, about 350 years ago. Almost all of these inscriptions have been copied and are being worked up.

A fine group of Pueblo ruins is situated in the Pajarito Park. These are the largest that have been found, some of them having contained as high as 1,200 rooms. The largest and most interesting are Puye, Otowi, Tsankawi, Navakwi and Tshrega. These have been carefully mapped and measured, but very little excavation has been done. In the same region are several hundred smaller Pueblo ruins, containing originally from one room to 500 each. This class in the Pajarito Park is built of volcanic tufa. Similar ruins exist in Chaco Canon, in San Juan county. Here the prehistoric village Indians seemed to have attained their highest culture and development. There are fourteen large stone buildings in the region, several of which are in the best state of preservation of any such ruins that are known. They are vastly superior in construction to any of the present occupied pueblos. In some the walls still stand to a height of thirty feet and include remnants of the fifth story. They were originally from three to five stories high. They contain from 100 to 1,200 rooms each and were built of sandstone.

The most remarkable are Kin Kale, Wejegi, Una Vida, Hungo Pavis, Chetiro Kettle, Bonito, Tuba Kin, Penasco, Blanco, Pueblo Alto, Kin Klizhin and Kimineola. Nowhere else in this country are there such splendid groups of prehistoric buildings in a fair state of preservation. They are also the richest known relics of prehistoric culture. The Pueblo ruins at Gran Quivira, at Abo, at Pueblo Viejo, in the San Mateo mountains, and near Santa Fe, as well as the cliff dwellings on the Gila, are equal in historic and archæologic interest to those mentioned above.

In these localities is found practically every phase of the prehistoric culture of the southwest. The Pajarito Park lies near the City of Santa Fe, and is easy of access in the northern part from Espanola, on the Denver and Rio Grande Railroad, in the central part from Buckman, on the same road, and in the southern part from Thornton, on the Santa Fe Rail-



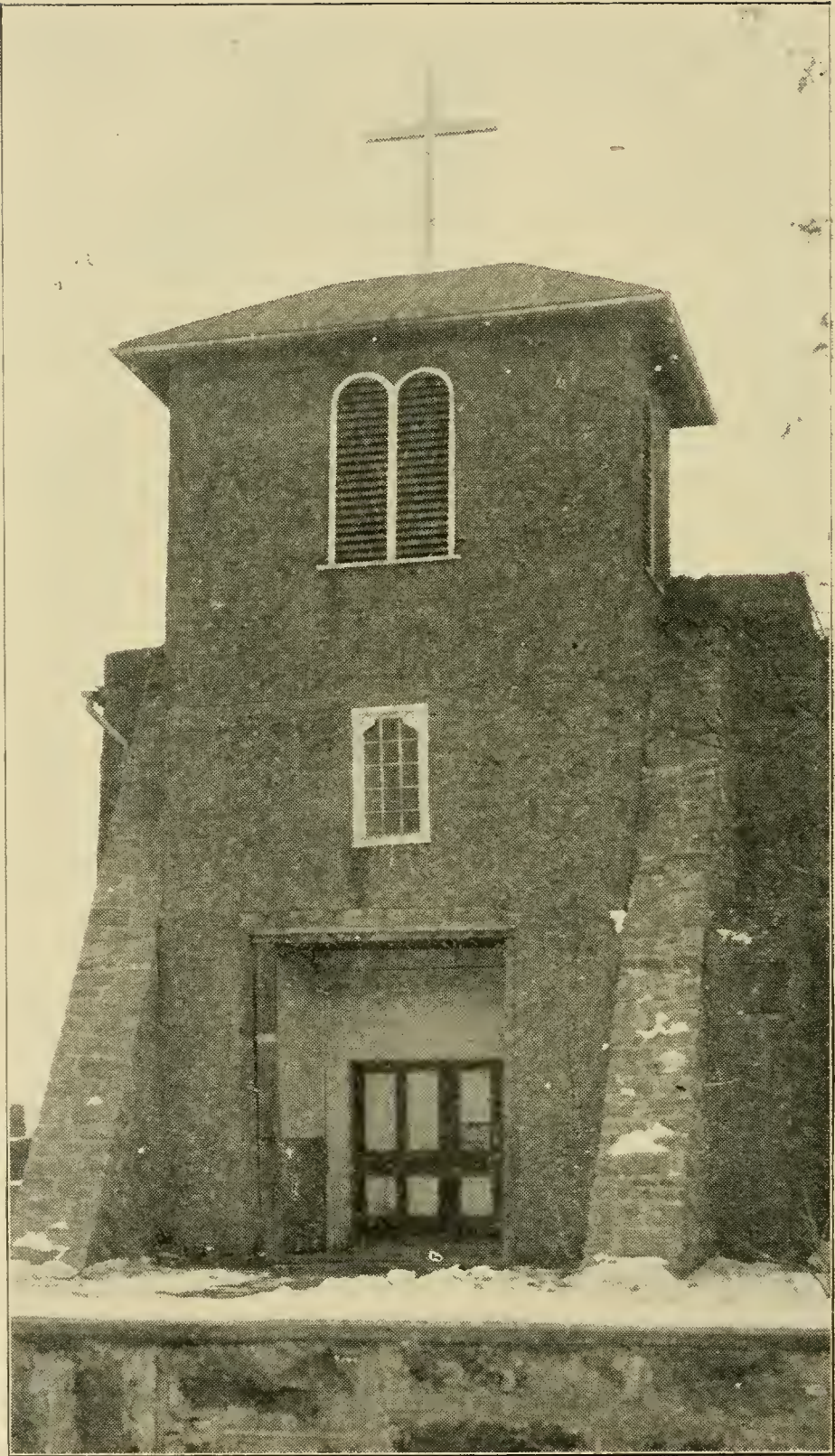
CAVE DWELLINGS IN THE PAJARITO PARK.

way via Cochiti. The Chaco Canon is about seventy miles from Thoreau, on the Santa Fe Pacific Railway, and about 120 miles from Durango, on the Denver and Rio Grande Railroad. It may also be reached in about four days drive from Bernalillo or Santa Fe.

The Old Mission churches. Foremost in interest and value in historic archæology are the old mission churches of the Franciscans. In every occupied Indian pueblo and at the site of almost every abandoned pueblo, there is one of the monuments of those pioneers of Christianity and civilization, the Franciscan Fathers. Many of these are in a good state of preservation, while others are in ruins, but every one is an object of historic interest.

The old mission church of San Diego, which is the oldest of the California missions, was founded in 1769. It is almost a total ruin; only the front remains in a good state of preservation. The side walls are still standing, but no portions of the roof or interior remain. This is the most venerable and venerated historic monument in the State of California, and is annually visited by thousands of tourists. It has stood for 164 years. It marks the beginning of civilization and Christianity in California.

In New Mexico, on the upper Pecos, thirty-five miles west of Las Vegas, at the site of the abandoned Pueblo of Cicuye, are the ruins of the old Pecos church. They are as well preserved as those of San Diego. The church is 300 years old. It was nearly 150 years old when the San Diego mission was founded. It was projected before the Spanish Armada was destroyed and antedates the coming of the Mayflower and the settlement of Jamestown. All that is said of the old Pecos church, may be said of that of Jemez. They were built at the same time. The one at Quivira was founded in 1630, and is a fairly well preserved ruin. The churches at San Ildefonso and Santa Clara are in a complete state of preservation. They are nine years older than the oldest of the California ruins. The old San Miguel mission in Santa Fe has been rebuilt. Its walls date from 1650, the roof from 1694, or possibly a few years later. These are only a few examples selected at random from the large number of ancient churches of equally great interest scattered over New Mexico. Inscription Rock near Zuni and



SAN MIGUEL'S CHURCH AT SANTA FE.

every one of the pueblos from Taos on the north to Isleta on the south, and from the Rio Grande pueblos in the central part, to Zuni in the west, are all worthy of a visit both for historic and present day interest.

There is no other building to compare in historic interest with the Old Palace at Santa Fe, and there is no city or town in the United States which offers so much of interest to the tourist as that city.

Scenic Wonders.

New Mexico possesses many scenic attractions. Its mountains equal the Alps in ruggedness and height; its valleys and waterfalls have a picturesqueness of their own; its forests such as are included in the Pecos and other forest reserves offer sylvan retreats of rare beauty; its mesas and plains are not without their attractions, and a visit to its old settlements as well as to the Indian pueblos and the Indian reservations is well worth many miles of travel. The Scenic Route road that is being built between Santa Fe and Las Vegas, through the Pecos forest reserve, and over the highest and steepest divides of the Sangre de Cristo range, open to the traveling public as beautiful scenery as any in the world. The Sacramento Mountain Railway in Otero county is a wonder that brings travelers from all parts of the United States. The Gran Quivira ruins, the Salt Lakes, the White Sands, Inscription Rock, the Mal Pais, the Jornada del Muerto, the Guadalupe Caves, possess a weirdness and an interest that have made them world-famous. New Mexico's hot springs, mountain retreats and summer resorts combine many advantages and attractions difficult to find anywhere else. New Mexico has an atmosphere of its own, just as Spain, Italy or Greece. Here the civilization of centuries ago and of today meet; here are found prehistoric ruins and historic monuments, the history of yesterday and of today have left their impression side by side: the civilization of the Indian, the Spaniard, the Mexican and the Yankee commingle. Still, New Mexico is strictly up-to-date in its government, in its hotels, railroad accommodations, in the protection the law affords, in its universities, its colleges, its public schools, its sanitariums, its charitable institutions, in its progress and in its prosper-



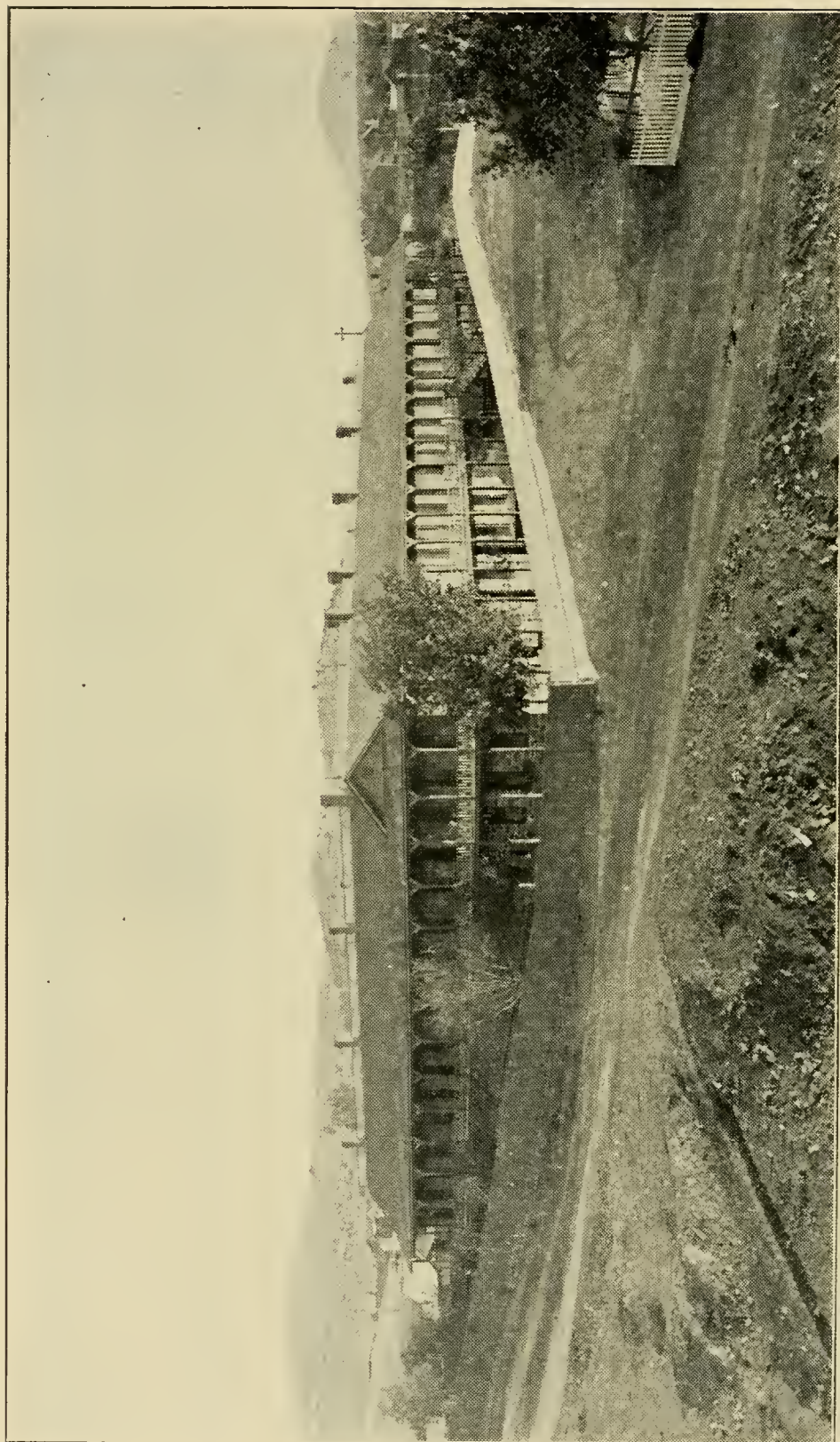
COMMUNAL BUILDINGS IN THE PAJARITO PARK.

ity. Churches are found in every settlement, newspapers in every town, together with fine stores, banking institutions and every safety, comfort and luxury that the centers of civilization of the east afford.

A General Invitation.

New Mexico wants more people, it needs them, it has room and resources for them. It offers to immigrants a fine climate, homesteads, great natural resources: to the health seeker health: to the tourist scenic and historic attractions: to the sportsman good fishing and hunting: to the summer and winter guests, the best summer and winter climate in the world, hot and cold mineral springs, mountain retreats, ranch resorts, good hotel accommodations and the comforts and luxuries of modern communities: to the farmer good crops, not threatened by climatic vicissitudes: to the coal miner permanent work and good pay: to the prospector extensive mineral deposits: to the mechanic and professional man the same and better chances than any other country that is settling up, room on the top if he deserves it: to the stockman a free range and an ideal climate for stock raising: to the manufacturer openings to establish factories and mills that should yield good profits: to the real estate man cheap land and a chance to make money by putting up modern residences, and to the capitalist opportunities to make more money and to buy anything that his heart may desire, from a land grant as big as a European kingdom, to a gold or copper mine worth a million dollars.

Health seekers should come to New Mexico by all means. They should come before disease has made inroads upon the system if they want to be sure of recovery, they should come if the disease has advanced noticeably, for possible cure or a certain prolongation of life: but they should not come without means or provision to pay their way, the first year at least. The jobs for health seekers are few and far between and a health seeker should not work for a living for a time after coming to New Mexico, if he desires to regain his health speedily. Living is about as reasonable in cost in New Mexico as anywhere else in the United States. The health seeker can live in a tent, on a vacant lot or out on the mesa, and if he

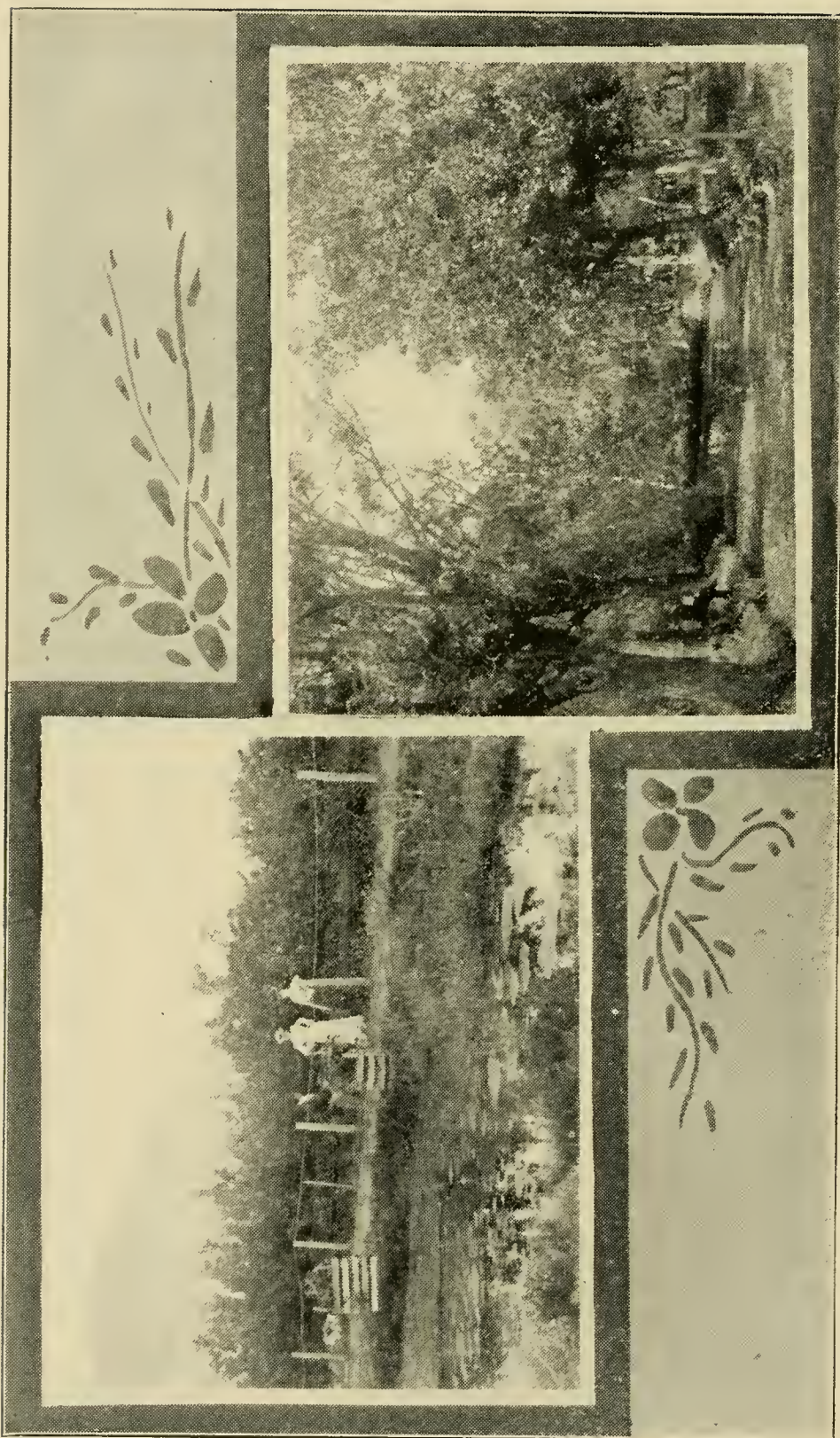


SANITARIUM AT SILVER CITY.

cooks his own meals, living need not cost him \$4.00 a week; at a tent city, a hotel or a sanitarium he can have lodging and board from \$6.00 to \$15.00 a week, and at private houses at from \$5.00 to \$10.00 a week.

The laws of competition and trade are the same here as elsewhere. Fortunes are very seldom made in one day. The poor man who comes to New Mexico must expect to work and to work hard for a living; the capitalist must invest and invest judiciously to make money. After this is said, however, it can also be truthfully said that New Mexico offers great opportunities to the honest and intelligent worker to become independent and to gain affluence and civil and political prominence; and to the shrewd and careful capitalist, greater and surer returns on his investment than any other section on the face of the Globe.

It is to the homeseeker, to the farmer, to the stock raiser, to the miner, to the merchant, to the manufacturer, to the capitalist that New Mexico is an undeveloped empire of magnificent resources which throws a peerless climate into the bargain with the rich returns that are offered to the man with capital to invest or with brain and brawn to apply.



ORCHARDS AT SANTA FE.]

CHAPTER VIII,

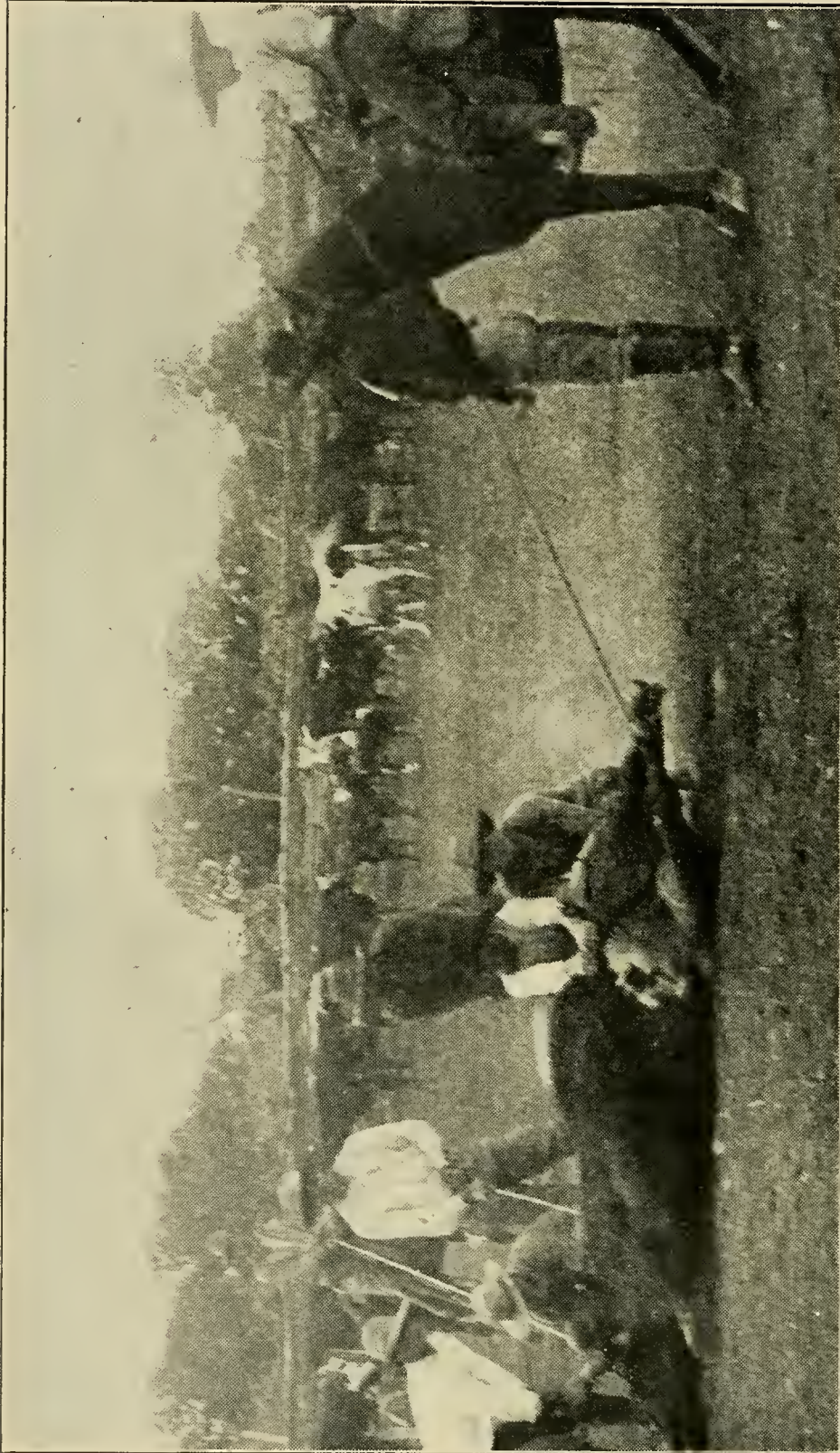
COUNTIES, CITIES AND TOWNS.

NEW MEXICO has an area of 122,469 square miles; which is more than the area of the kingdom of Italy with its 35,000,000 of people. The population is estimated to be 284,000. The Territory is divided into twenty-four counties. The northern are Union, Colfax, Taos, Rio Arriba and San Juan, all bordering on Colorado. The north central are San Miguel, Mora, Santa Fe, Sandoval, Quay and McKinley; the south central are Roosevelt, Chaves, Leonard Wood, Bernalillo, Valencia, Lincoln and Socorro; the southern tier consists of Eddy, Otero, Doña Ana, Luna, Sierra and Grant. A twenty-fifth county, Torrance, with county seat at Progreso, near the geographical center of the Territory, will come into existence on January 1, 1905.

Bernalillo County.

This is the smallest and most populous of the counties. Area 1,567 square miles, which is several hundred more than the area of the State of Rhode Island. Population 25,500. Assessed valuation in 1903, \$3,103,500. Post offices, Albuquerque, Old Albuquerque, Alameda, Carpenter, Chilili, Griegos, Martinez, Milagros, Padillas, Pajarito, Palma and Isleta. Of its 1,002,962 acres, 563,123 acres have been appropriated, being located mostly in land grants, while 425,000 acres are still subject to entry under the United States land laws.

The principal industries are manufacturing, farming, fruit growing, stock raising and railroading. Its central location, great diversity of topography and fine climate, railroad facilities and the fact that the Rio Grande flanked by a fertile valley on each side, cuts through the county from north to south, place its prosperity on a permanent basis. There are 250,000 acres which eventually can be placed under irrigation and 300,000 acres are considered good pasture. In seasons of average rainfall, the grass grows abundantly and owing to its peculiar character cures on the ground during the fall, and instead of washing out and becoming valueless like the ordi-

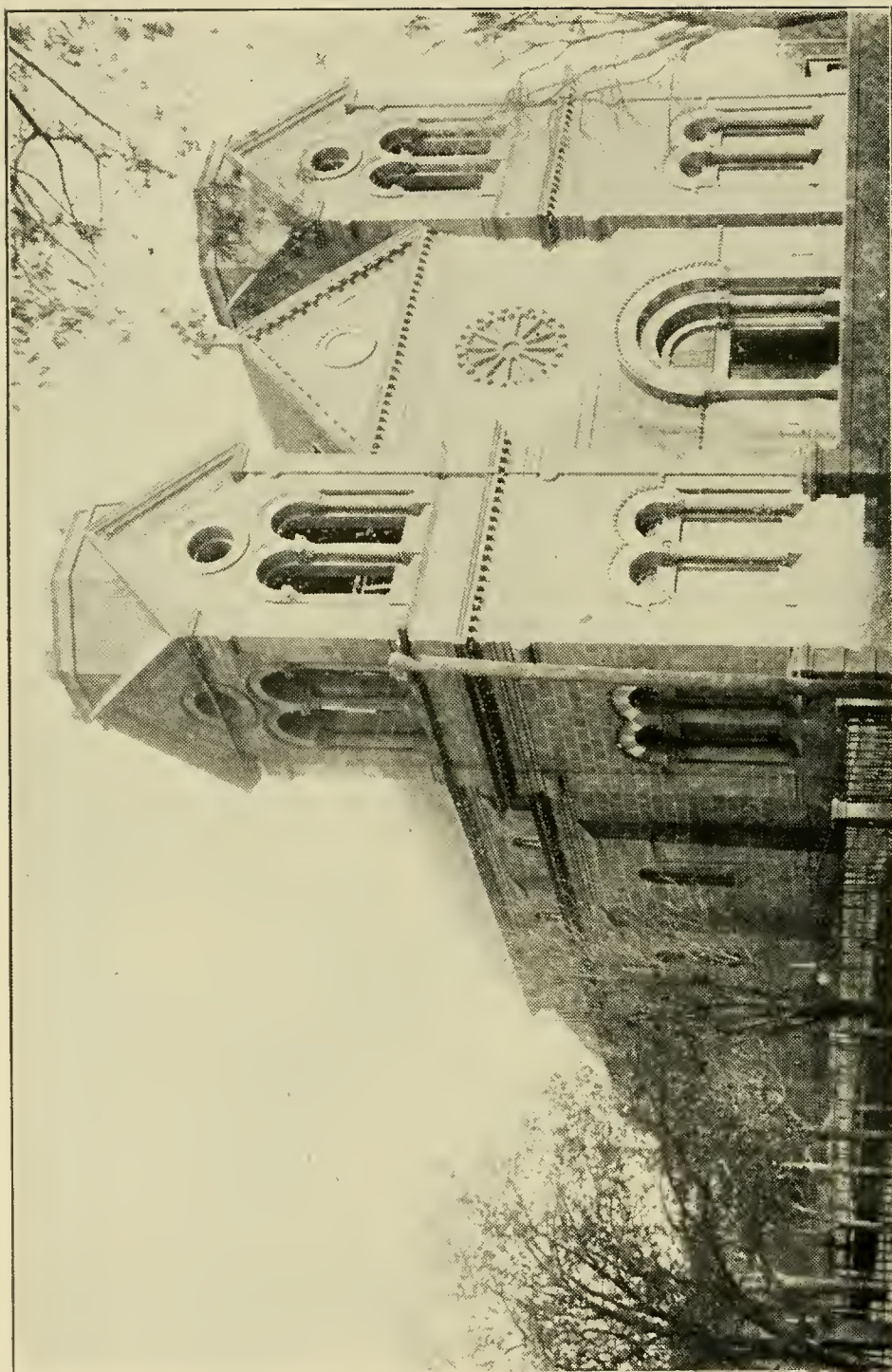


BRANDING CATTLE.

dinary grass, it is like hay and makes almost as good feed in the winter as in the summer. The county has quite an irrigation system. The total area under ditch at present is 20,000 acres of which about 5,000 are cultivated. There are many available reservoir sites and room for modern irrigation systems. The soil of the valley is strong, especially in the mineral elements, being composed almost entirely from detritus from the mountains and foothills and lacking only the addition of a very little animal or vegetable matter now and then to keep it rich indefinitely. The true farming policy is to have small farms, closely cultivated and yielding as land can only be made to yield under irrigation. In addition to the ordinary grain and vegetable crops, tobacco does especially well. Some of the soil being alkaline, asparagus proves very profitable. Besides the Rio Grande, the Rio Puerco flows through the county from north to south, but as it has cut its bed deep into the soil, there is not much irrigation along the upper portion of the stream. The Santa Fe Railway traverses the county. The Santa Fe Central cuts through the eastern part and the Santa Fe Pacific forms a junction with the Santa Fe at Isleta, in the southern part. The Albuquerque Eastern will soon be constructed from Moriarty, Santa Fe county, to Albuquerque, over the Tijeras pass in the Sandias, a distance of forty-three miles. It has forty miles of railroad, to which the Albuquerque Eastern when completed will add twenty-five miles. Its principal mountain ranges are the Sandias and the San Ysidros. There are good mineral indications but no large mining camps as yet, although at Milagros in Hell Canon, and in the Sandias, considerable prospecting and some development work has been done. Coal veins crop out on the surface near Tijeras canon in the Sandias and in the north-western part of the county. Isleta, one of the largest Pueblo Indian villages, is situated in the southern part, and as it is at the junction of the Santa Fe Railway and the Santa Fe Pacific Railroad, it is much visited by tourists. The county seat and the largest city of New Mexico, is

Albuquerque.

In every sense, modern and progressive, it is the acknowledged commercial center of New Mexico. Its merchants cover



ROMAN CATHOLIC CATHEDRAL AT SANTA FE.

a trade territory of about 100,000 square miles, or a district larger than the six New England States and the State of New York combined, which gives the place a wholesale trade much larger than is done by any eastern city of three times its population. The population of the place, according to the census, was 6,326. Old Albuquerque, which is practically a portion of the city proper, has 1,191 people, and more distant suburban precincts have 4,613 inhabitants, giving the city and suburbs a population of 12,042 at the time of the census of 1900, and a very conservative estimate places the increase since that time at 3,000, making the present total a little more than 15,000. It has a fine system of public schools, with a large and modern school house in each ward and a handsome high school building centrally located. There are in addition, a number of good private schools, while denominational institutions are maintained by the Methodists, Presbyterians and Catholics. It is also the seat of the University of New Mexico, established and maintained by the Territory and endowed by the United States with a liberal donation of public land. The University buildings are located upon an eminence about 200 feet above the general level of the town, with an unobstructed view for many miles in every direction. With the Sandia Mountains twelve miles east for a background, the view takes in the Jemez mountains, sixty miles north, the San Mateos, seventy miles west, and the Socorro and Magdalenas seventy-five miles south, while with the glass may be seen the Mogollons, more than 225 miles to the southwest. The institution has a first class faculty and ranks among the best western colleges. "Hadley Hall," a handsome \$20,000 structure, gives the University a department devoted exclusively to the study of climatology, with a special reference to the effect of climate on the cure and prevention of tuberculosis and kindred diseases, the only institution of the kind in the United States.

Albuquerque is also the location of a large government Indian Industrial School with more than 300 pupils. In the matter of religious advantages, the town is very thoroughly equipped. All the leading Christian denominations have congregations there, with good commodious houses of worship. There are places for public entertainment and amusement, including the Opera House just completed, in which are



RESIDENCES AT ALBUQUERQUE.

given lectures, operas, theatrical entertainments, etc., and during the entertainment season the people of the city are never at a loss for "some place to go." One of the institutions of Albuquerque worthy of special notice is the "Commercial Club." This represents a successful combination of business and social interests, and possesses within the one organization all the principal features of a chamber of commerce and a social club.

Shops of the Santa Fe Pacific Railroad are located here and furnish employment to over 700 men.

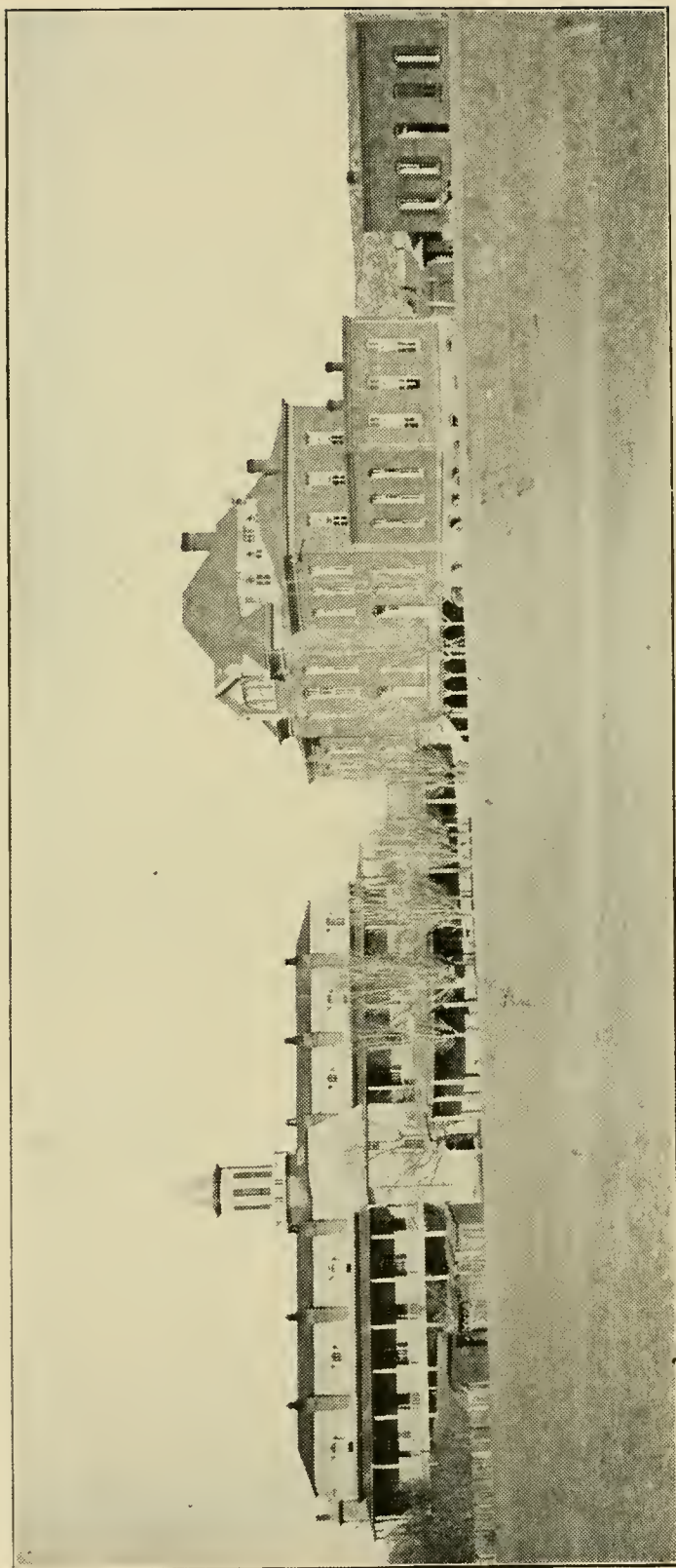
There is a system of water works. There are also electric light and gas plants. The streets are lighted by electricity. The city has an electric street railway and free delivery of mail.

Water for irrigation purposes can be secured from driven wells from ten to thirty feet deep anywhere in the Valley of the Rio Grande, but for city purposes it is procured from wells 100 to 600 feet deep.

The streets are graded and most of them paved with natural cement from the neighboring hills, and laid upon a foundation of cobble stones and gravel, making a thoroughfare very firm, smooth and durable. Good sidewalks line the principal streets, the popular material for this purpose being artificial stone made of sand and Portland cement upon a foundation of gravel.

One of the largest sanitariums in the west is located here and is conducted by the Sisters of Charity. The Santa Fe Railway Company has built at this point the finest and most commodious station building and hotel on the line of its road between Chicago and San Francisco.

The manufacturing interests in addition to the railroad shops, are represented by a foundry, and machine shops; a brewery and two ice factories, two flouring mills, two mineral water establishments, a planing mill, four brick yards, two cigar factories, a broom factory, a wool scouring plant, two steam laundries, a box factory and many smaller establishments. Of the 22,000,000 pounds of wool produced annually in New Mexico, Albuquerque merchants handle fully one-fifth, a large portion of which is now manufactured at home by a woolen mill of fair capacity. This enterprise is very com-



ST. MICHAEL'S COLLEGE AT SANTA FE.

prehensive in its scope and includes all the processes of pulling, scouring, dyeing, tanning and manufacturing wool and leather.

The American Lumber Company has erected a large saw mill just northwest of the city with a capacity of 100,000 feet of lumber per day.

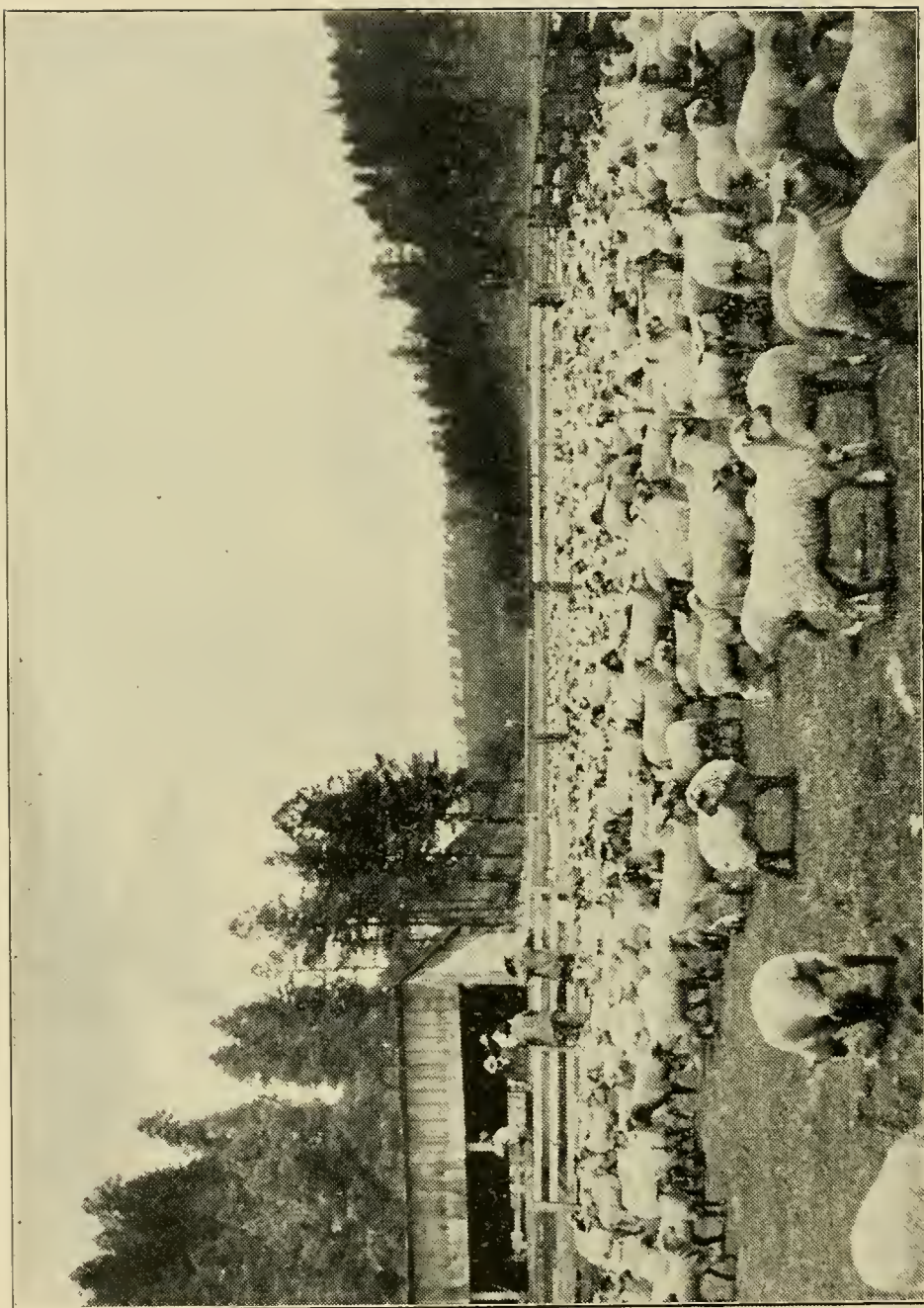
There are openings here for a canning factory and a beet sugar factory, not to speak of a tannery, shoe factory, furniture factory and other establishments. The census of 1900 credited the county with \$864,604 capital invested in manufactures, \$793,644 of that being invested in Albuquerque. This gives employment to 1,140 men, and the value of their products is \$2,007,772 a year.

Nearly all lines of business, commercial, mechanical, and professional, are represented. The town has several prosperous banking institutions.

There are two daily papers: The Albuquerque Journal, issued every morning, and the Albuquerque Daily Citizen, every evening except on Sunday; six weekly papers, two English and four Spanish, and several monthly publications. The town also possesses the largest and best free public library in the southwest, which is maintained by a special tax levied by the city and for which a fine building was recently donated by a public spirited citizen.

Albuquerque has good railway facilities. The Atchison, Topeka and Santa Fe gives it access to all points north and south, while the Santa Fe Pacific gives it a direct communication with all the country between the Rio Grande and the Pacific coast. That portion of New Mexico directly east of Albuquerque has never been in close touch with the city by rail, but the want of first class facilities in that direction will be supplied by the Santa Fe Central and the Albuquerque Eastern. The former road is completed, while the latter will be in course of construction soon.

The climate of Albuquerque, while it possesses the characteristics of that of New Mexico in general, is milder in winter than that of the more northern towns, and owing to its lower altitude the city is a sanitarium for those health seekers who cannot bear the more severe winters and the greater altitude of the northern counties. During the summer months



SHEEP IN CORRAL.

the near-by City of Santa Fe and the many convenient mountain resorts offer a refuge from the heat, which, is at no time as oppressive as it is in the more humid east. It is only during the afternoon hours in July and August that the maximum temperature at times reaches 100 degrees, which seems ten degrees to twenty degrees lower than it would be in a more humid climate.

Chaves County.

Area 5,599 square miles and a population of 10,000. It is the most rapidly growing of the counties and while formerly the open range live stock interests were the mainstay, it is today a great producer of alfalfa and fruit. Its system of artesian wells and abundance of irrigation water from the Pecos and tributaries have brought to it a new glory. The splendidly stocked Hereford and Shorthorn breeding ranches and the sheep and wool growing industries, however, are expanding for the greater part of this little empire always will be grazing land, pure and simple. The irrigation systems at present obtain their supply of water from four sources: The immense springs in the vicinity of Roswell fed by subterranean streams of artesian nature. From these five limpid streams flow, the North Berrendo, Middle Berrendo, South Berrendo, North Spring and the South Spring rivers. These are stocked with black bass offering sport to the disciples of Isaac Walton. From artesian wells which are making this region famous. From flood waters from the great watershed of the White Mountain region. At Roswell begins the canal system of the Pecos valley in which millions of dollars have been invested, and which, taken as a whole, is the finest in the United States. The Pecos river carries a large volume of water and divides the county into halves, crossing it from north to south. In the artesian well district are 75,000 acres of cultivable fertile soil and this area will eventually be increased to 150,000 acres. The first flow is reached at a depth of from 150 to 200 feet and it costs from \$200 to \$250 to drill a well to reach it. The second flow is tapped at 250 feet and a well to it costs from \$300 to \$350. A fair average of the flow is 600 gallons a minute although a maximum of 3,500 gallons is reached by one well, and there are others flowing from



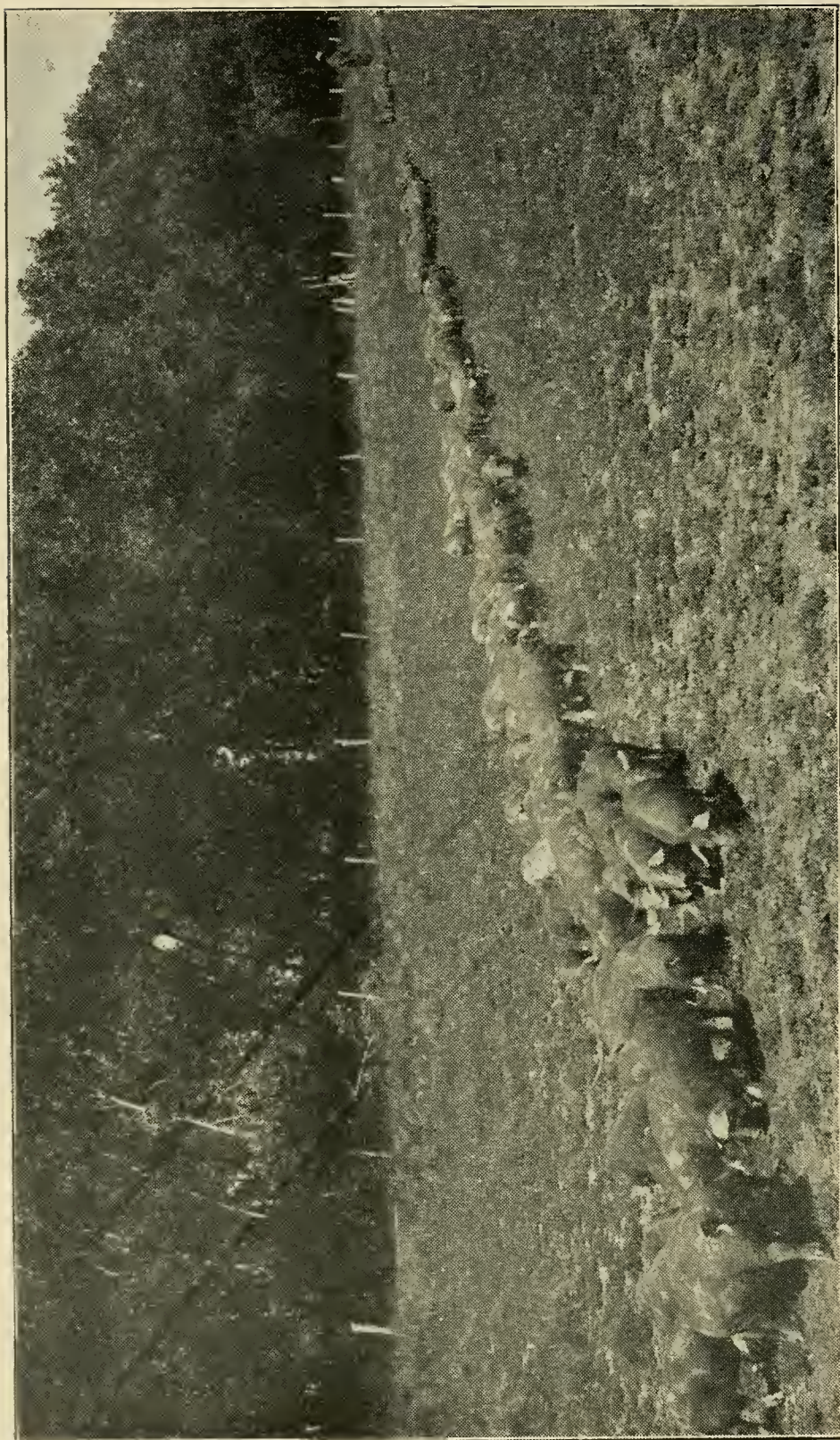
ARTESIAN WELL AT ARTESIA.

1,000 to 1,500 gallons a minute. With a storage reservoir, one well furnishes enough water to irrigate 160 acres of land. The United States government has decided to build a reservoir on the Hondo at a cost of \$300,000, which will reclaim 12,000 acres. The county has 12,000 acres in apple orchards, producing good fruit. Plums, pears and peaches, the last on high ground, do just as well. Cantaloupes and melons attain their greatest development in flavor and general character right here, and celery has become a staple crop. Oats, rye, barley, alfalfa, sorghum, millet, Kaffir corn, wheat, potatoes, onions and garden vegetables flourish. A specialty is being made of high grade cattle, one ranch having 1,200 head of superb Herefords, including the famous Ancient Briton, that cost \$4,000. The assessment in 1903, was \$2,939,012. There are 300,000 sheep and 100,000 cattle in the county. Fattening hogs on alfalfa is also proving a profitable industry. The county has 5,351,106 acres of public lands subject to entry, an area equal to that of the State of Maryland. The post offices are: Alellen, Dexter, Elk, Felix, Glen, Hagerman, Kenna, Lower Penasco and Roswell. The county seat is

Roswell,

a city of 6,000 inhabitants, the fourth largest town in New Mexico and growing at a rapid rate. It is a pretty and progressive town, being situated in the commercial, lineal and geographical center of the Pecos Valley Railroad system. It is located near the confluence of the abundant waters of the Pecos and Hondo rivers, and is the supply and shipping point of a large area for both cattle and sheep, surrounded by fertile lands and exhaustless irrigation resources, including both the canal and the artesian wells. The town is daily adding to its importance as one of the most active and prosperous business centers of New Mexico.

The city is replete with brick business blocks and residences; is the site of the New Mexico Military Institute, has two large modern public school buildings, two newspaper plants, the Daily and Weekly Record, and the Roswell Register, three national banks, an elegant and commodious club, an ice factory, a wool scouring plant, many churches, numerous and ever being added to wholesale and retail houses,

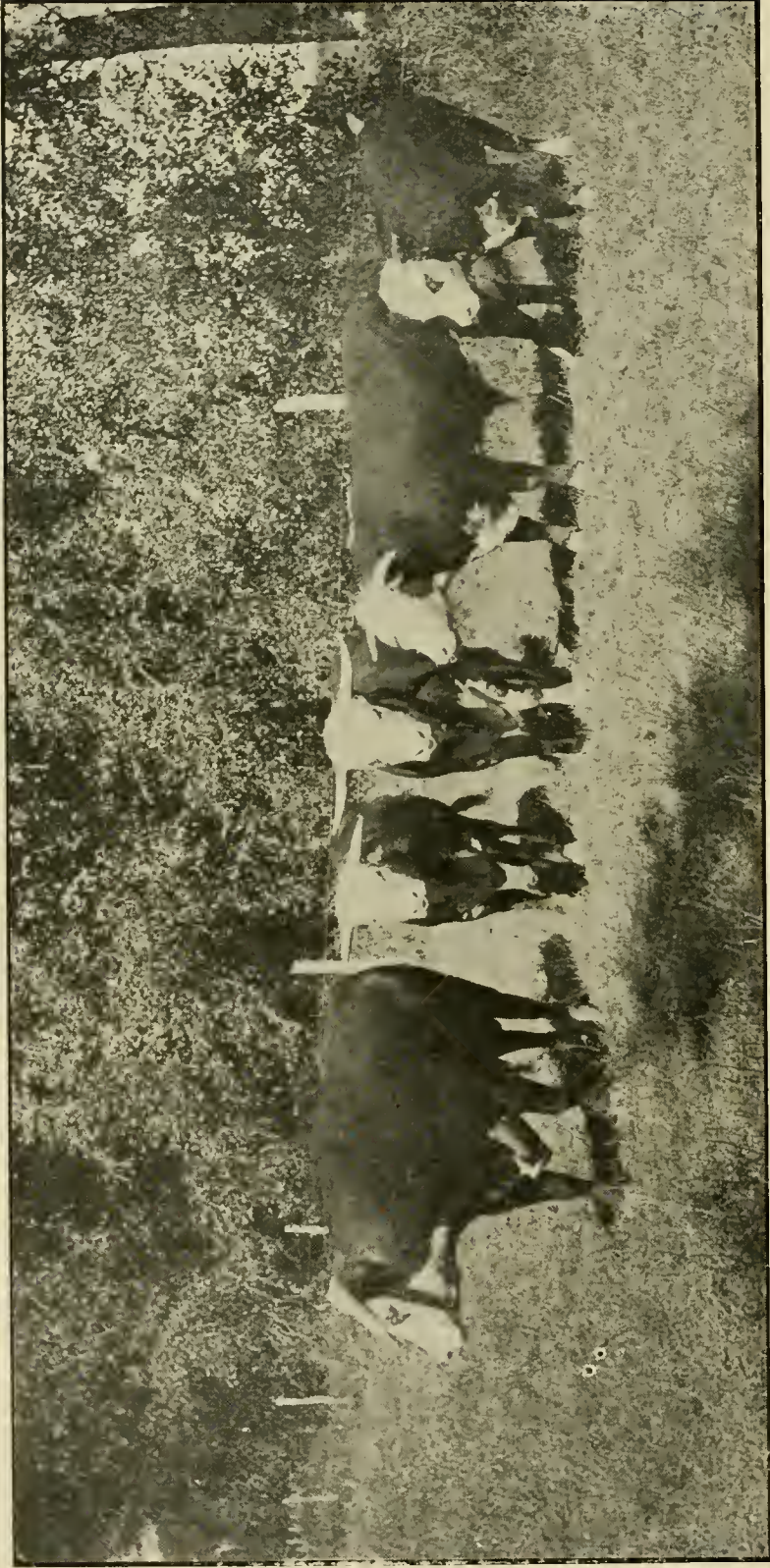


HOGS ON RANCH NEAR ROSWELL.

and tributary and extensive stock yards. The climate is noted for its healing effect in pulmonary affections, and every year sees an added influx of health seekers.

Hagerman

is the second largest settlement and was laid out in 1893 by the Pecos Valley Town Company, in Chaves county, and was fittingly named in honor of J. J. Hagerman of Colorado Springs, whose enterprise, sagacity and capital were the origin of the present great development. It is situated twenty-four miles southeast of Roswell, and is surrounded by thousands of acres of the choicest agricultural, fruit and grazing land in the country. It has a population, with its immediate surroundings, of about 800, and the intelligence, thrift and morals of its people are plentifully attested by fine brick business houses, attractive and commodious homes, schools and churches, careful observance of approved sanitary principles and a general air of neatness and good order. The town and country adjacent have been settled by progressive and energetic people, chiefly from Illinois, Iowa, Nebraska and Kansas, and their wisely directed efforts have already transformed the barren waste of ten years ago into a veritable garden spot that blooms like a rose. With the magic touch of water the careful cultivation has achieved wonders here. The magnificent irrigation system constructed by the Pecos Irrigation Company extends from a point four and one-half miles due east of Roswell thirty miles south and irrigates the fine body of land tributary to the town of Hagerman and is now controlled by the Felix Irrigation Company. The water supply thus afforded has been increased by the development of artesian water in many places. Many small farms are plentifully watered from these never falling wells, and much of the supply in the canals is conserved for use on large tracts further down the valley. The value of these wells will be understood by readers unfamiliar with the facts when it is explained that a well flowing 100 gallons a minute, if none were lost by seepage or evaporation, would cover seventy-eight and one-half acres to a depth of twenty-four inches in a year. Allowing one-half for loss by evaporation in reservoirs and ditches, a 400 gallon well will then furnish twenty-four inches

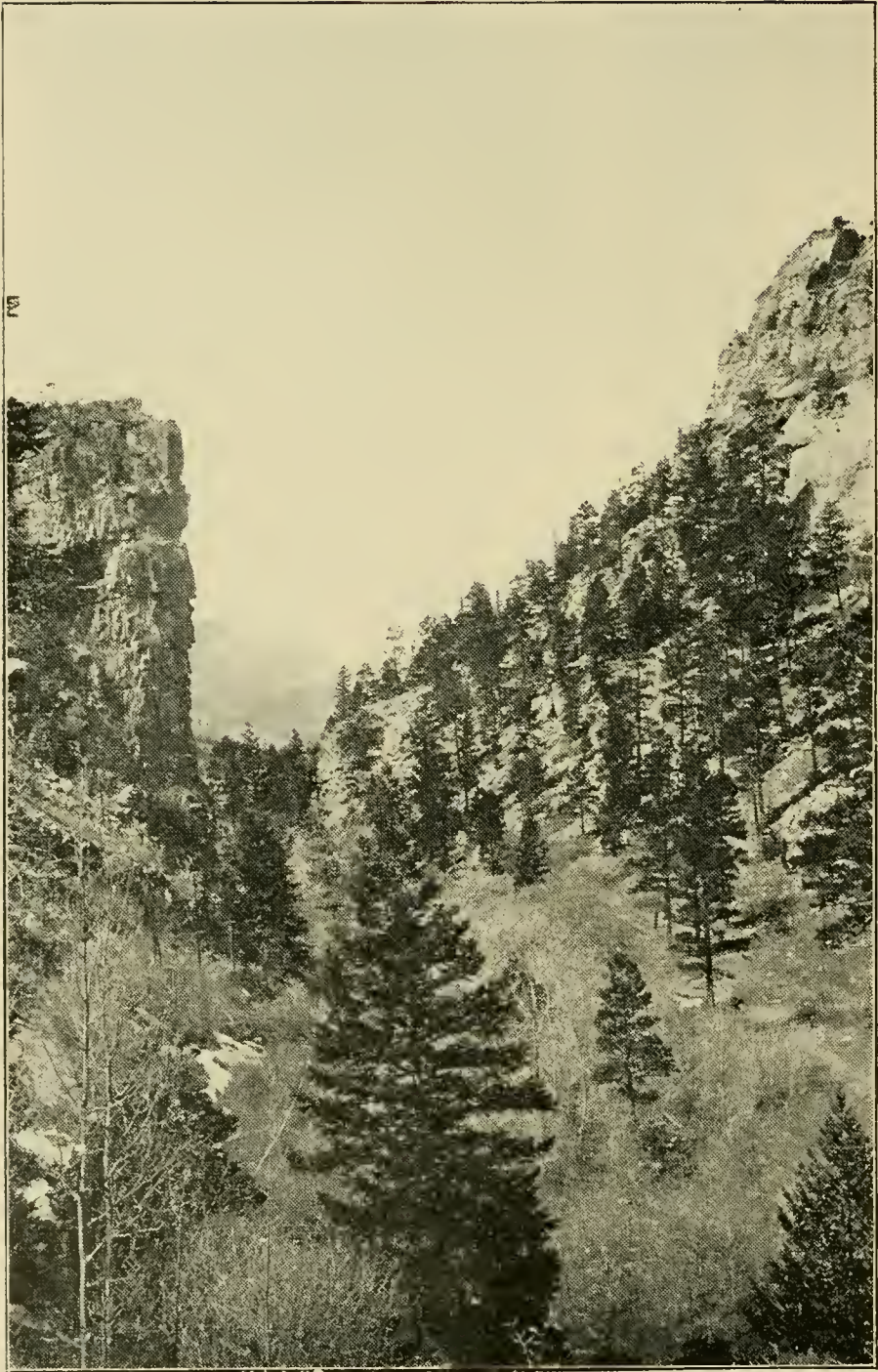


HIGH-GRADE HEREFORDS ON RANCH NEAR ROSWELL,

for a quarter section during the year. Considering that twenty inches of rainfall is sufficient for a crop, when much of it comes out of season and often in injurious excess, it will readily be understood that twenty-four inches stored in reservoirs and applied only when needed is ample. This is not theory. It has been clearly demonstrated in actual practice at both Roswell and Hagerman.

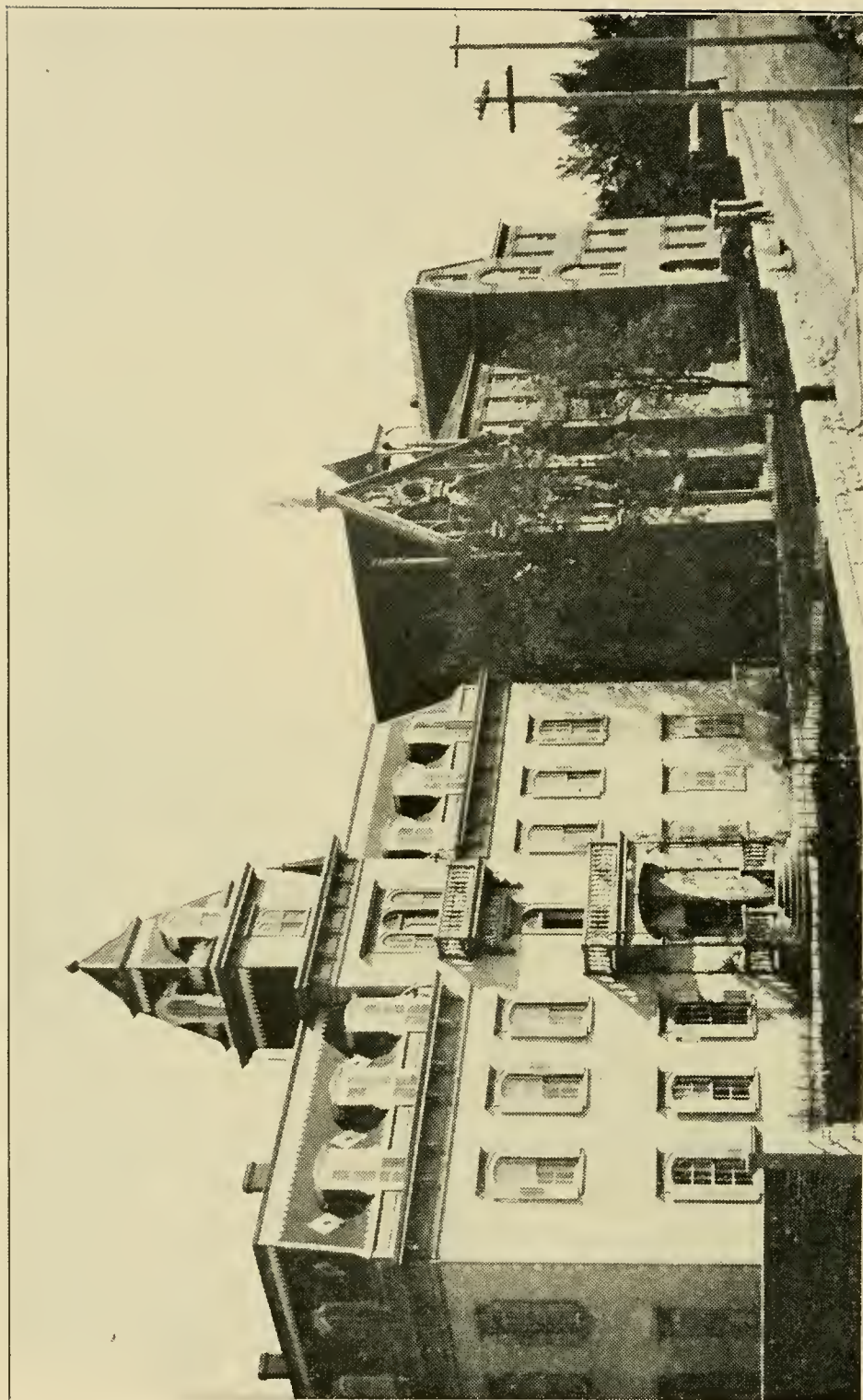
Colfax County.

Nature has abundantly blessed Colfax county and man is doing his best to make it the richest section of the southwest. The area is 3,897 square miles, it being one of the smaller counties of the Territory. Still, it is twice as large as the State of Delaware. The population is 12,000, assessed valuation in 1903, \$2,881,411. The post offices are: Aurora, Baldy, Bell, Black Lake, Blossburg, Catskill, Chico, Cimarrón, Colmor, Dawson, Dorsey, Elizabethtown, Gardiner, Hebron, Lynn, Maxwell City, Osha, Ponil, Raton, Rayado, Springer, Van Houten, Vermejo and Willow. The county is rich in mineral, agricultural and stock resources. Coal, gold, iron, graphite, cement and gypsum are among its mineral products, not to speak of oil indications. About 600,000 acres are still subject to entry under the land laws. The Maxwell Land Grant Company, which at one time owned more than one-half the area comprised in the county and has done much for its development, still has on the market thousands of acres which it sells to home seekers upon very liberal terms. The western part is mountainous and here are located the Elizabethtown, Moreno, Cimarron and Baldy mining districts, which have produced gold to the value of several million dollars. Here also rise the Vermejo, Cimarron, Sweetwater, Ponil, Rayado, Chico, Moreno and Ocate rivers, which furnish irrigation waters for a large agricultural area. There are many fine reservoirs sites, and the Maxwell Land Grant Company has constructed several irrigation systems excelled only by those of the lower Pecos valley. The principal of these are the Cimarron or Springer system, which takes up the drainage of thirty miles of the majestic Taos range, and the Vermejo system, along which there are twenty reservoirs. The climate is fine and the altitude which ranges from 5,000 to



CIMARRON CANON, COLFAX COUNTY.

12,000 feet, offers invariably cool nights and cool summers, a dry, rarefied atmosphere and protection from the north and west winds. The principal agricultural sections are the valley of the Sweetwater, the Rayado, the Cimarroncito, the Cimarron, the Ponil, the Vermejo, the Red River, the Una de Gato, the Chico, the Moreno and the Piedra, the Vermejo Park, the Black Lake section and Johnson and Barela mesas, on which last two named, crops are raised without irrigation. Wheat, potatoes, beets, cabbages, carrots, parsnips, turnips, artichokes, celery and other staple crops are produced. The region around Springer is especially adapted to the cultivation of the sugar beet. The Springer, Mills, Dawson, Chase and other large ranches are famous for their fruit and alfalfa crops. Apples, peaches, pears and plums are the leading orchard products. The county is very favorably located for stock raising. The mild winters, the cheap range and the cheapness of the grazing privileges on the Maxwell grant, as well as a good deal of water and of shelter, make it a fine stock section. Timber is also a source of wealth, but only in the western part. On the slopes of the Raton and the Taos ranges there are 500,000 acres of merchantable timber, principally yellow pine and cedar. Near Elizabethtown are the Moreno placers which produce more gold annually than any mine or other placer in New Mexico. There are also a large number of well developed lode mines carrying gold, copper, silver and other minerals, their distance from the railroad, however, restricting their production. It is in its coal fields that the county has its greatest source of wealth. Over half a million tons are produced annually by the coal mines at Dawson and Van Houten, while there are developed coal mines at Blossburg, Gardiner, Raton and Johnson's mesas. The Santa Fe Railway cuts through the country from north to south and the Dawson Railway enters its southeastern corner and runs northwest to its present terminus at Dawson. The county has good wagon roads. It is a leader in education and every settlement has its school house and church. The county seat and fourth largest city in New Mexico is

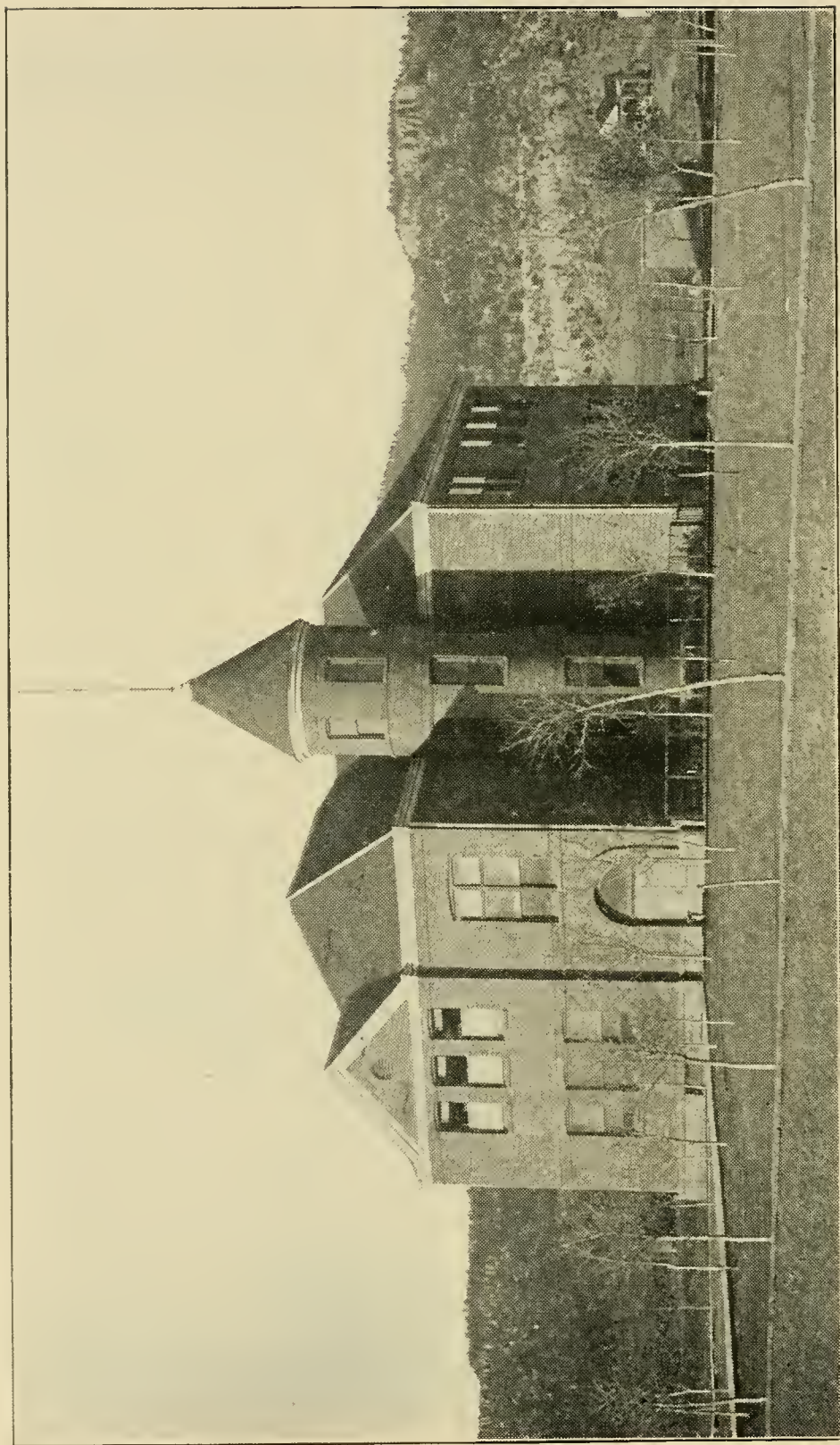


LORETTO ACADEMY, CHAPEL AND CONVENT AT SANTA FE.

Raton.

It is one of the most prosperous and progressive cities in the southwest. The last census gave it a population of 3,450, but with its suburbs it now has 8,000 people, and is adding to its population at the ratio of ten per cent per year. It is called the Gate City of New Mexico. In ten years from 1890 to 1900 it increased its population 200 per cent. It is situated in the shadow of the Raton mountains and is in the center of the finest coal belt in the southwest, surrounded by prosperous stock ranges, and has tributary to it a wide agricultural section. It is also in a promising oil field, and an important division point on the Atchison, Topeka and Santa Fe Railway, the company maintaining extensive shops there. Over \$50,000 a month are distributed by the railroad company at this point. The trade of the surrounding coal camps is transacted at the Gate City, which means a monthly pay roll of \$40,000 in and about the city. The commercial lines are well represented, and a considerable wholesale business is done. The town has an excellent gravity water system, the water being taken from the Chico Rico, a pure, purling mountain stream. The water is piped from a reservoir of 52,500,000 gallons capacity, 500 feet above and six miles from the city. Raton has a good fire department and two of the finest school buildings in the southwest. The streets are well graded and lighted by electricity, and the recently constructed court house is very handsome. The Atchison, Topeka and Santa Fe Railway has recently completed a \$50,000 depot. The city has two national banks, long distance telephone with Colorado points, cheap coal, lumber and building material and a Building and Loan Association. It has a number of beautiful church buildings, representing several Protestant denominations and the Roman Catholic faith. The Territory is building a hospital for miners in the city.

Four weekly papers are published, The Range, The Reporter, The Gazette and El Relampago. The elevation is 6,668 feet. The city attracts many healthseekers who find here a superior climate and comfortable accommodations.



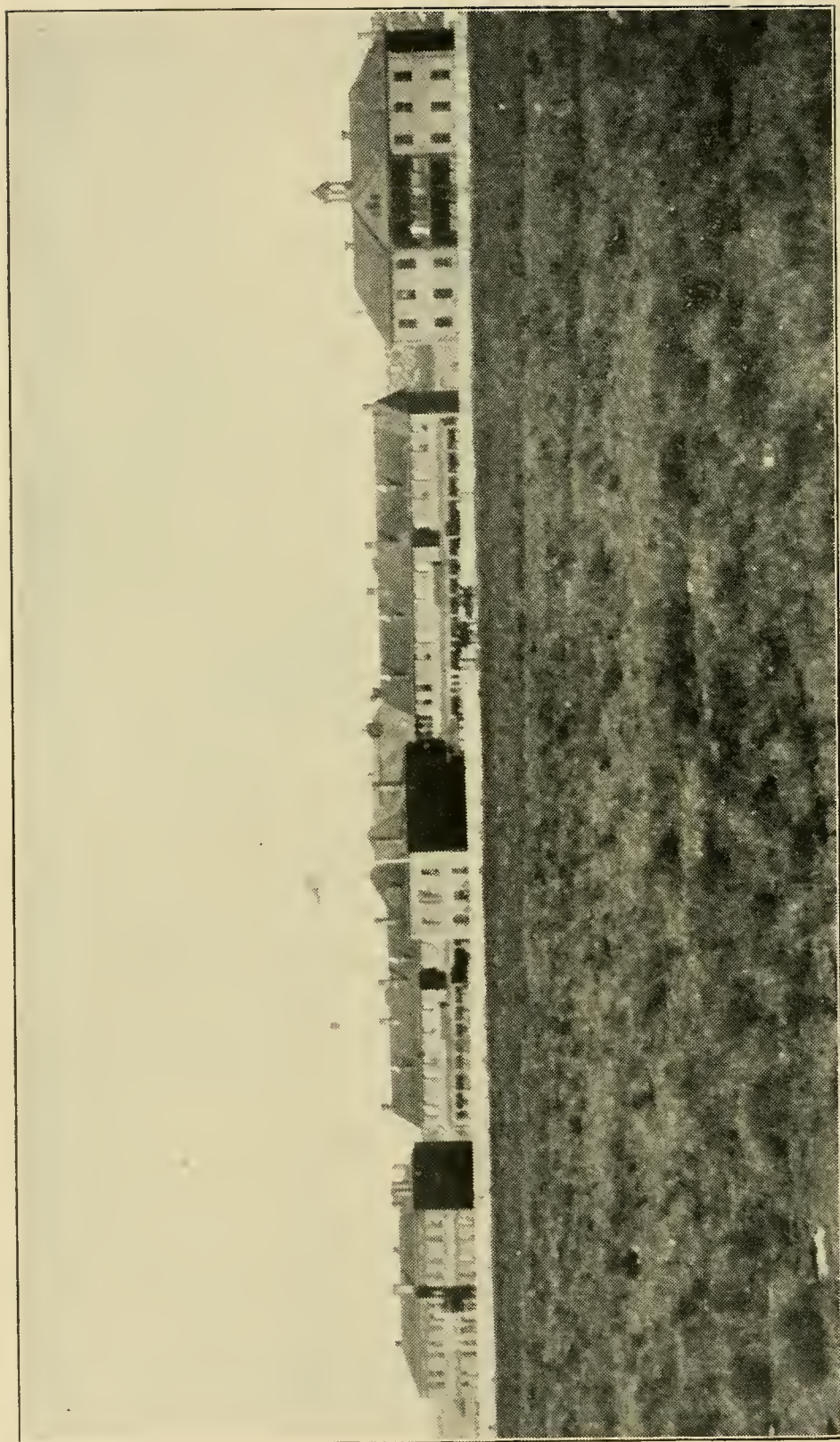
PUBLIC SCHOOL BUILDING AT RATON.

Springer,

the county seat of Colfax county, before the honor was bestowed upon Raton, is second in importance, although only fifth in population in the county, the census crediting it with 558 people. But Springer is growing since the recent completion of the Dawson Railway which passes near the town. It is the center of a fine stock and agricultural section and there are oil and coal indications in its vicinity. Cement rock and gypsum beds are located a few miles from that town. Its elevation is 5,769 feet. It is an important shipping point on the Santa Fe Railway and controls the trade of a large extent of country. Near Springer is an artesian well pouring out mineral water. The town is the trade center for the Elizabethtown, Ute Creek and Cimarron mining districts, and maintains a daily stage line to these points. It is near the irrigation systems of the Maxwell Land Grant Company. The Weekly Colfax County Stockman is published here. The town has a good school system and several churches. The Colorado Telephone Company has extended its long distance telephone line from Raton to Las Vegas via Springer and other towns along the Santa Fe Railway, thus bettering communication.

Dona Ana County.

The garden of New Mexico, whose climate in winter approaches that of Egypt in its mildness, has an area of 3,818 square miles, or twice that of the State of Delaware. Assessed valuation in 1903, \$2,189,899. Population 13,000. Of its area about one-half is still subject to entry under the public land laws. Doña Ana county lies almost wholly in the basin of the Rio Grande which flows through it in a southeasterly direction for 100 miles, carrying enough water if properly stored and distributed, to make it a renowned granary and vineyard. At its northwest boundary are the Goodnight, Magdalena and Caballo ranges, protecting it on the west and on the north, while the San Andreas and Organ mountains pass through its eastern portion in a grand and majestic series of peaks, abounding in mineral riches. The best known region is the Mesilla Valley, lying at an altitude of 3,800 feet. The widest scope of cultivation surrounds the towns of Las Cruces, Mesilla Park, Doña Ana, Chamberino and La Mesa.

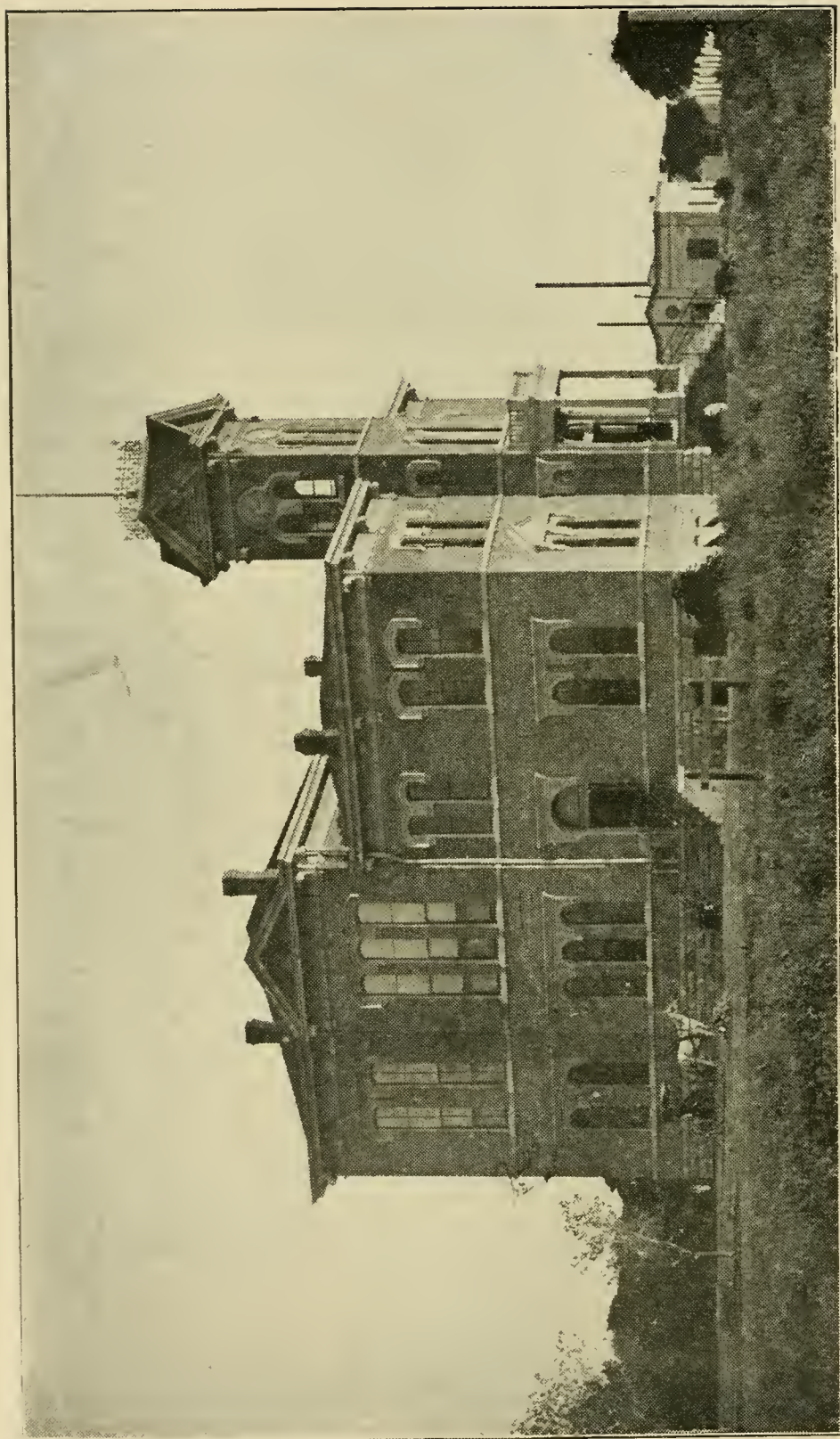


UNITED STATES INDIAN INDUSTRIAL SCHOOL AT SANTA FE.

This part of the valley is from seven to ten miles in width, and its soil is very fertile. Orchards come into bearing the second year after planting and saplings develop into trees with rapidity. Its peaches and grapes have carried its fame far and wide. Pears, plums, apples, apricots, nectarines, almonds, pecans, English walnuts and semi-tropical fruits and vegetables are grown. There is a cannery at Las Cruces and wine and brandies are manufactured. There are six flour mills in the county. About 60,000 acres are under ditch although only two-thirds of this area is under cultivation. In the valley there is a tremendous underflow from the Rio Grande which makes water available by pumping. The national government is also planning to construct an irrigation system by damming the Rio Grande at the Elephant Buttes which would furnish abundant water to reclaim the entire valley, and will build a diverting dam in the Rio Grande at Penasco Rock, eighteen miles north of Las Cruces. Cultivated land in the vicinity of Las Cruces may be purchased at from \$20 to \$50 per acre. There are satisfactory railroad facilities, the mileage being 160. The Santa Fe Railway crosses it from the northwest to the southeast, the Southern Pacific in the southern part from east to northwest and the El Paso and Southwestern along the southern boundary from east to west. The county has 3,000,000 acres of range which furnish pasture the year around for cattle, sheep, goats and horses. In the Organ and San Andreas mountains there are successful goat ranches. There are several mining camps, that at Organ having produced considerable gold, silver and copper. In the San Andreas and Black mountains, the mineral indications are very promising and considerable prospecting and development work has been done. The post offices are: Anthony, Berino, Chamberino, Doña Ana, Earlham, Garfield, Hatch, Las Cruces, Mesilla, Mesilla Park, Modoc, Organ, Rincon, Rodey and Victorio. The county seat and largest town is

Las Cruces,

the City of the Crosses, beautifully situated on the eastern edge of the far-famed Mesilla Valley and in the midst of the largest body of cultivated land within the Territory. This valley has an average width of about five miles and is seventy



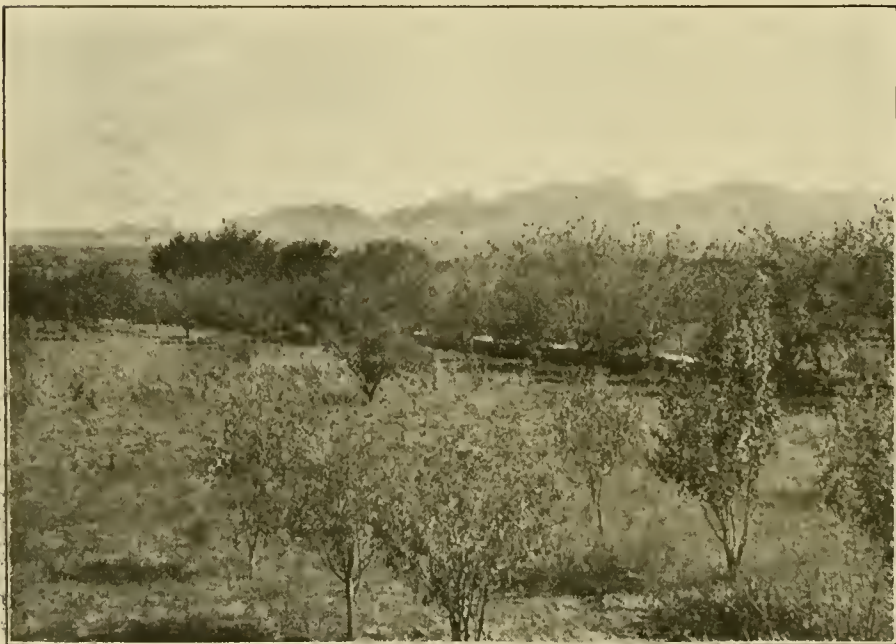
MAIN BUILDING OF THE COLLEGE OF AGRICULTURE AND MECHANIC ARTS AT MESILLA PARK.

miles in length, embracing 100,000 acres of the rich alluvial soil of the Rio Grande. However, only a comparatively small portion of the valley is under cultivation, perhaps 30,000 acres in all. Of course, all cultivation is by irrigation. For this purpose the Rio Grande furnishes an abundance of water usually, but in late years there have been occasional drouths for brief periods; but the farmers and orchardists have within the last few years learned that there is an inexhaustible flow of water under the surface of the ground at a depth of about twenty-five feet and that it is perfectly feasible and profitable to utilize this underground flow to supplement the river in times of scarcity. Consequently a number of pumping plants have been erected in different parts of the valley and are now in use whenever required. When it is considered what has been accomplished in California by the use of water raised by means of pumps for irrigation, the advantages of the valley in this respect may be partially realized. The town of Las Cruces was laid out in the year 1848, at the close of the Mexican war, by American officers from the post then existing at Fort Selden, eighteen miles above the town. Before that time the valley had been the habitat of the Apache Indians, who were so numerous and fierce that no one dared to settle at points in the valley outside of the little hamlet, six miles above the town, and the lands of the valley were totally unutilized. But with the protection which came with the American occupation, settlers rapidly came, and the valley now has a population of approximately 10,000 people. Las Cruces is the largest town in the valley. The census of 1900 gave the two precincts in which the town is located a population of 2,906. The town proper has at present a population of 3,000. The other settlements in the valley, almost contiguous to the town are Mesilla Park, Mesilla, Colorado, Rincon, La Mesa, San Miguel, Chamberino, Garfield and Anthony. The town is regularly and symmetrically laid out, and in parts well shaded. It has an altitude of about 3,800 feet. The altitude, combined with the latitude, renders the winter months the most delightful in the world, while the heat of the summer is tempered and cooled with the rains which come about the first of June and extend into the fall. The town has a solid and substantial basis for its prosperity. It is essentially an



GAME IN THE SACRAMENTO MOUNTAINS.

agricultural town, dependent in the main upon the prosperity of the neighboring farms and orchards for its welfare. There are about twenty general merchandise stores and the usual assortment of drug stores, banks, hotels, restaurants, saloons and offices of professional men. A few miles to the east are the beautiful Organ mountains where gold, silver, copper and lead ores have been and are being mined profitably, contributing to the prosperity of all classes in the town. There are also on the neighboring ranges many cattle, sheep and goat ranches, which are in a healthy condition. Within two miles of the town is the College of Agriculture and Mechanic Arts and the Agricultural Experiment Station. These are institutions endowed liberally by the national government and the Territory, and under their supervision. They are largely patronized by students from all parts of the Territory, from the neighboring sections of Texas and Mexico, and receive some students from almost every state in the Union, who come for the sake of the opportunity afforded to acquire a knowledge of the Spanish language and Spanish stenography. The town, too, has in late years become the Mecca of an ever-increasing class of persons afflicted with lung and throat troubles. These unfortunates have found in the mild winters and dry atmosphere the exact conditions necessary to restore them to health. Some of them make it a practice to come every fall and winter, while others purchase ranches, farms and orchards, and settle down into permanent residents. The "Alameda" is a resort built and managed exclusively for the benefit of this class of sufferers. Las Cruces is the seat of the United States district court and of a United States land office. Besides the College, the town has two graded and well managed public schools and two private schools. The Sisters of Loretto, a Catholic order, maintain an educational institute. The Roman Catholics and several of the leading Protestant denominations have church organizations. Two English weekly papers, the Citizen and the Rio Grande Republican, are published at Las Cruces, and two Spanish weeklies, El Labrador and El Tiempo. At the College a monthly is published. The fraternal orders are well represented, the Masons, Woodmen, Odd Fellows and others having lodges. The town also has a thriving Chamber of Com-



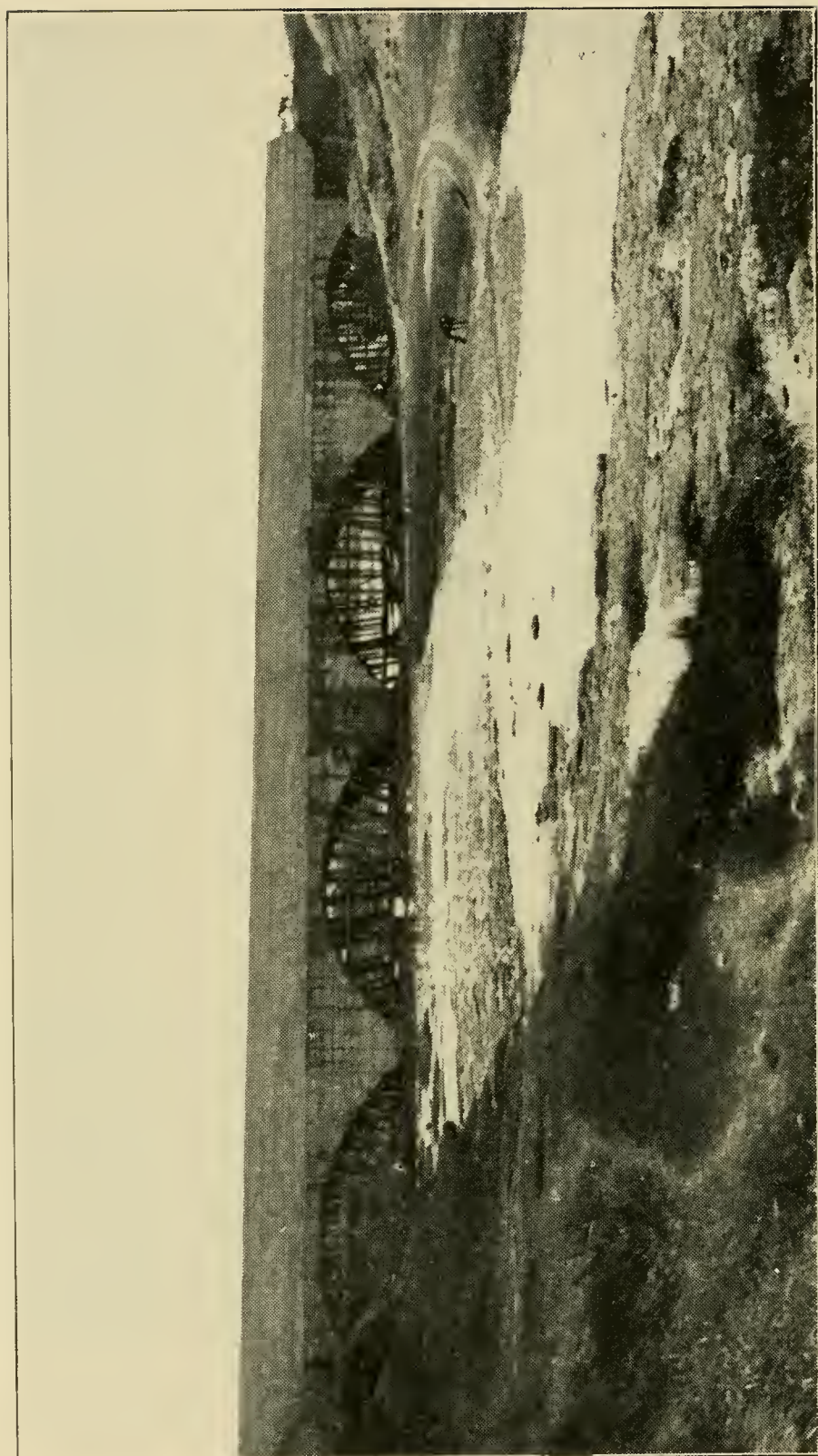
VIEWS IN THE MESILLA VALLEY.

merce, which is doing much in making the advantages of the town and valley known to the outside world. A canning factory enjoys an extensive patronage, and the demand for its products is greater than can be supplied, and there is an opening for other industries.

Eddy County.

Area 6,505 square miles; population 6,500; assessed valuation in 1903, \$1,937,914. The county is the Riviera of New Mexico. It is the garden spot of the Lower Pecos Valley which extends north and south 120 miles and east and west between the foothills from five to thirty miles. It is the most southeastern and the lowest in altitude of New Mexico counties. It is almost as large as the State of New Jersey and of its area 3,600,000 acres are subject to entry under the land laws of the United States. The Pecos river flows through the eastern half from north to south and from the west receives a number of tributaries, several of which carry a considerable volume of water, as they drain the entire eastern slope of the Guadalupe mountains. With the exception of Westwater, on the western boundary, and Monument, near the eastern boundary, all the settlements are located in the Pecos Valley, the post offices being Artesia, Carlsbad, Dayton, Florence, Hope, Knowles, McMillan, Malaga, Monument, Stegman and Westwater.

The average summer temperature is eighty degrees above zero and the average winter temperature is fifty-five degrees above zero. The county has the finest irrigation system in the United States, formed by the damming of the Pecos river. Sufficient water is always available to irrigate 200,000 acres of land but only a comparatively small portion of this is thus far under cultivation, something like 10,000 acres. On this are raised large crops of alfalfa and peaches, although corn, sorghum, cotton, fruits and vegetables are also staple crops. In the northern part, especially at Artesia, artesian water has been developed. Outside of the Pecos Valley, stock raising is the principal, in fact, it is the leading industry. For every acre under cultivation there are more than 300 acres of grazing land. An abundance of water is being developed on the range and is lifted from wells by wind mills. The Pecos Val-

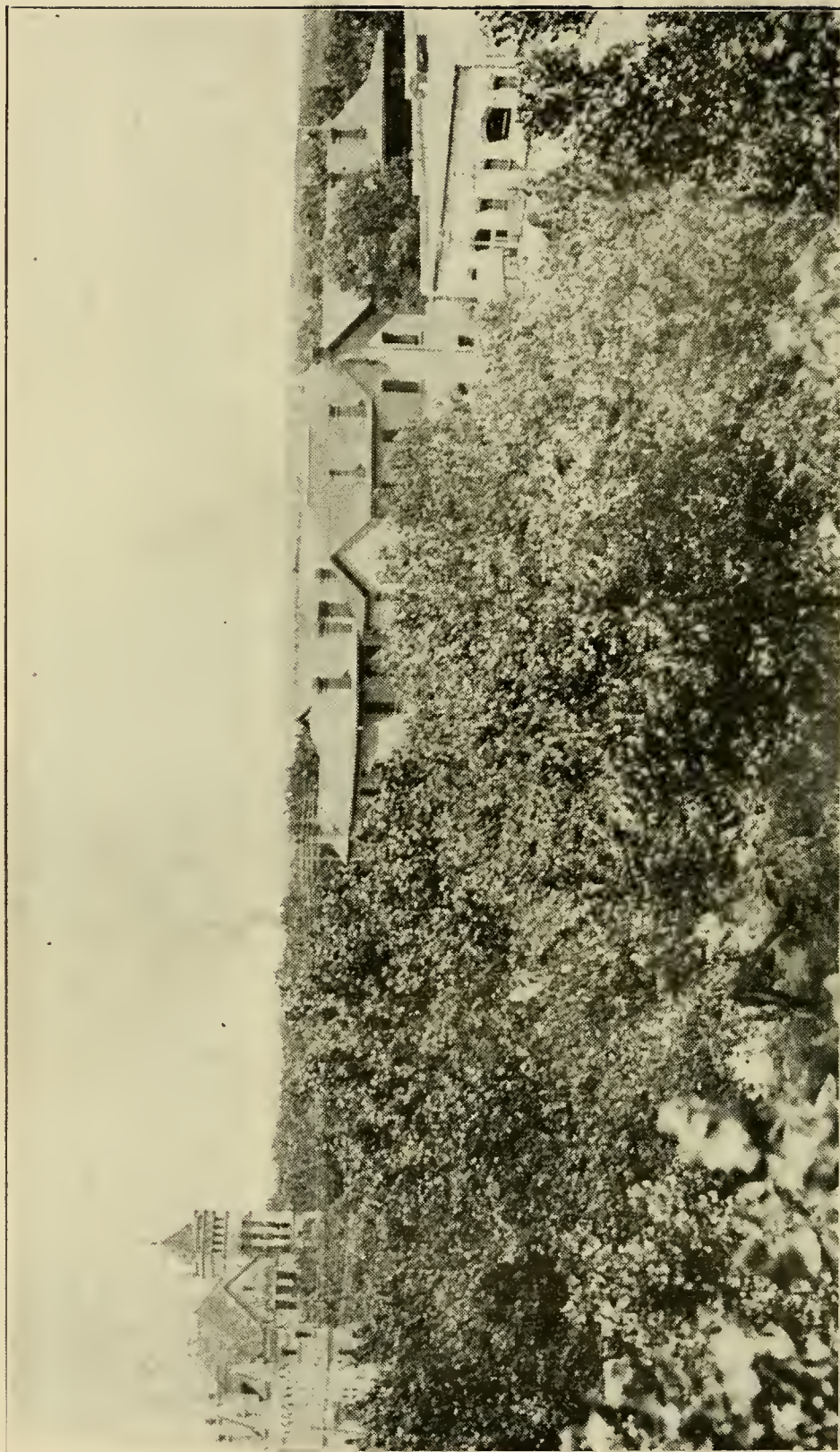


CEMENT FLUME NEAR CARLSBAD.

ley and its vicinity present today more inducements for the breeding of fine cattle than any other district in the south-west. Owing to the abundance of water for irrigation purposes, it is able to furnish feed for thousands of thoroughbred cattle for the building up of the surrounding stock ranches. Not only cattle but sheep and goats do exceptionally well. In the Guadalupe mountains, the Angora goat finds superior range and home, while 200,000 head of sheep of well graded Merino and Shropshire strains occupy the range. Bee culture can be made a profitable industry here. Around Carlsbad and south and west of that town, are oil indications while prospecting for mineral in the Guadalupe mountains has revealed large ore deposits, principally copper. Railroad facilities are furnished by the Pecos Valley and Northeastern Railway, which follows the Pecos Valley and is a part of the Santa Fe system. There are excellent oil indications south and north of Carlsbad and copper prospects have been developed in the Guadalupe mountains. The county seat is

Carlsbad.

It is often declared to be one of the most beautiful towns in New Mexico and it is certainly entrancingly situated amidst orchards and broad cultivated fields. Ever running waters in its irrigation ditches, its thirty-five miles of cottonwood and other shade trees, its wide streets and beautiful homes, all help to make it an attractive residence city. The suburbs of La Huerta and Hagerman Heights are far famed. The Bermuda and the blue grass furnish pretty emerald lawn settings. The ornamental shade trees include the Catalpa, the Chinese umbrella, North Carolina and Lombardy poplar, weeping willows, Russian mulberry, while encircling hedges of gray cedar bush and the green bamboo cane are ever and anon broken by the shining spike of the giant cactus palm or Spanish dagger. Here and there can be seen roses of all hues and sizes, blooming almost every month in the year, geraniums of fifteen and twenty varieties blooming in all the soft gradations of color from pure white to the deepest crimson and royal purple, and many other flowers in profusion. The arboriculture of Eddy county includes the walnut, the almond



A GLIMPSE OF CARLSBAD.

and the pecan, a flourishing grove of the latter in La Huerta growing more valuable every year.

The altitude is 3,000 feet. It is 1,326 miles from Chicago, 868 miles from Kansas City and 1,083 miles from Denver. With immediate surroundings it has a population of 2,000. Its public schools are up to date and housed in modern buildings. There are 500 children of school age in the city, and nearly all are enrolled in the public schools. There are churches of many denominations, a fine opera house, commodious business blocks, a \$35,000 court house, electric light, telephone, water and sewerage systems, graded and well kept streets and three weekly newspapers, the Carlsbad Argus, the Current and the Pecos Valley Stockman. The town is a modern and model American community with healthy business conditions, and a promise of a great prosperity in the future.

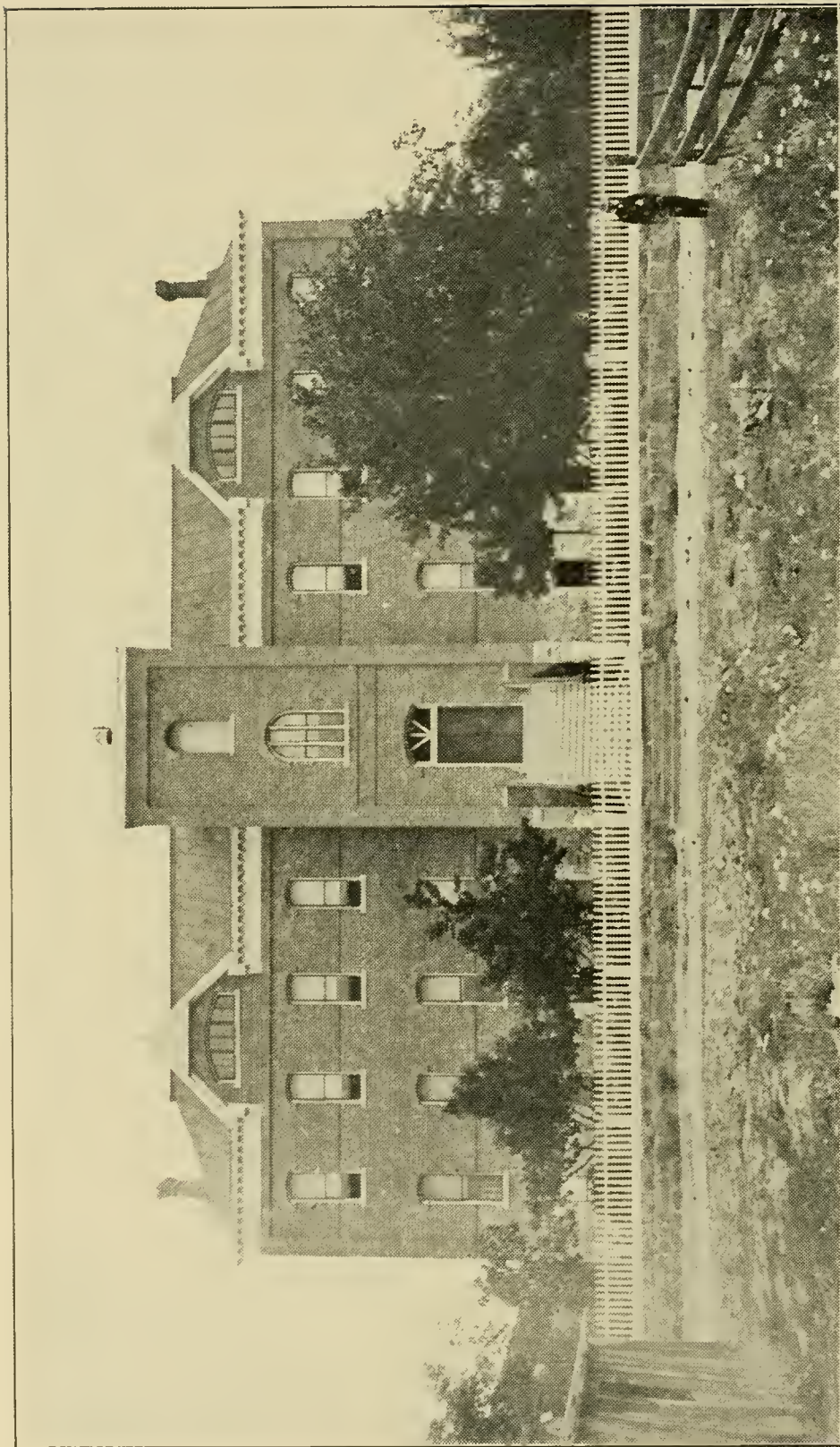
Carlsbad is considered one of the leading towns of New Mexico. It is the headquarters of the Pecos Irrigation Company, whose irrigation system is one of the wonders of the whole country. Near the town are mineral springs whose waters resemble those of Carlsbad, Europe, and near which a sanitarium is to be built next year. The town is on the Pecos Valley and Northeastern Railway which built a pretty brick depot recently at Carlsbad.

Artesia.

The discovery of artesian water in northern Eddy County has resulted in the founding of the flourishing town of Artesia, on the P. V. & N. E. Ry., which already boasts of a bank, a weekly newspaper, the Artesia Advocate, and a number of business houses. Its population is nearing the one thousand mark and the town is growing rapidly, every quarter section for miles around having been taken up by settlers.

Grant County.

This county is not only by far the heaviest mineral producer but it is also one of the leading stock counties of New Mexico. Its area is 7,432 square miles; its population 12,500; its assessed valuation in 1903 was \$2,912,977; its annual mineral production \$1,500,000; assessed valuation of its cattle \$1,000,000, the actual value being fully three times as much. The post offices are: Bayard, Central, Cliff, Dwyer, Faywood, Fierro,

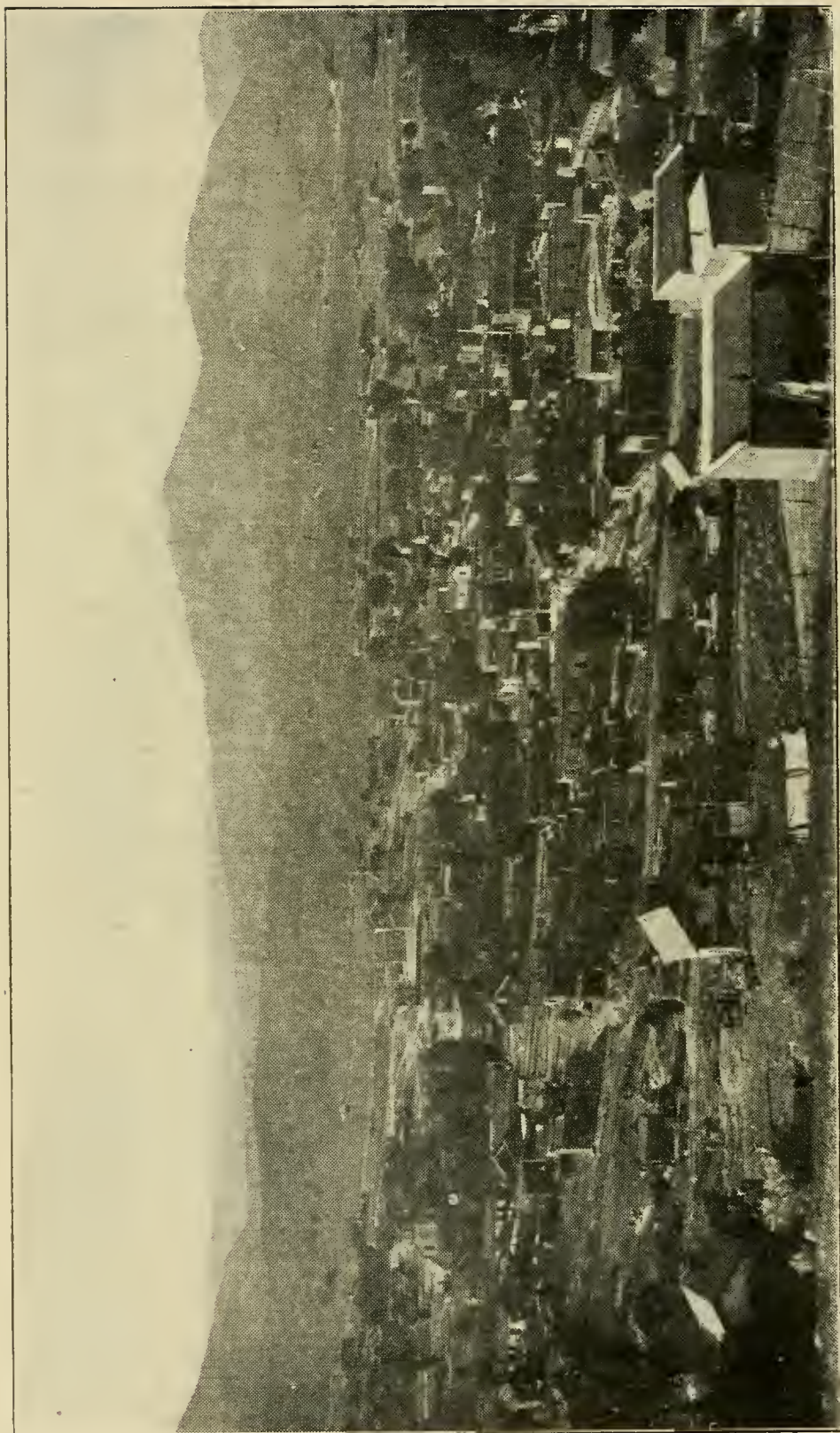


ACADEMY OF OUR LADY OF LOURDES AT SILVER CITY.

Fort Bayard, Georgetown, Goldhill, Hachita, Hanover, Lordsburg, Mimbres, Pinos Altos, Red Rock, Rodeo, Santa Rita, Separ, Sherman, Silver City, Steeple Rock, Stein's Pass, Swartz, Teel and Whitewater.

The county has good railroad facilities. It is crossed in the southern part by the Southern Pacific Railroad and the El Paso and Southwestern Railway. In addition the Santa Fe Railway enters it and has two branches, one from Whitewater to Santa Rita and the other from Hanover Junction to Fierro. The Lordsburg Hachita Railway is entirely within the county and the Arizona and New Mexico Railroad has its terminus at Lordsburg.

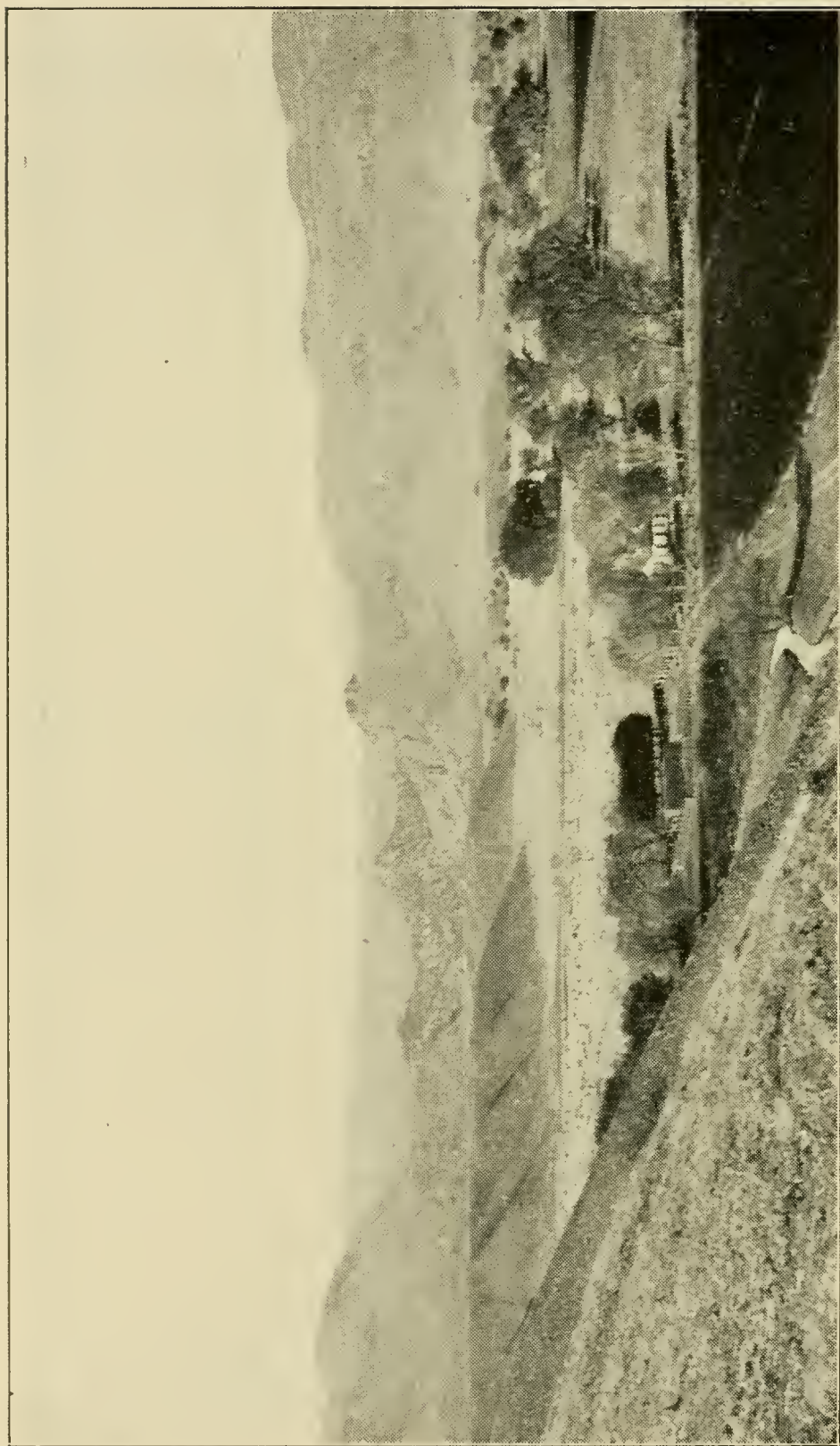
The county's area is equal to that of the State of New Jersey and 4,000,000 acres are still subject to entry under the land laws. The diversity of its industries has made this county one of the best and most prosperous. In its northwestern part the Gila, and in its eastern portion the Mimbres, furnish water for irrigation and there are about 150,000 acres adapted to agriculture that can be reclaimed but less than 10,000 acres are under cultivation. All the orchard products, grains and vegetables do well in the county. The Mimbres Valley produces especially fine apples. In addition to cattle, sheep, goats and hogs are raised and yield good profits. The county is very mountainous although none of the peaks attain a great altitude. In these mountain ranges are valuable deposits of copper, iron, gold, silver, zinc and turquoise. Many of the mines are extensively developed and a few have been worked for over a century. Last year almost a million dollars worth of copper was produced and about 150,000 tons of iron ore were shipped from its mining districts. Several reduction works and mills are in operation. The principal mining camps are Hanover, Santa Rita, Fierro, Central, Gold Gulch, Pinos Altos, Burros, Red Rock, Steeple Rock, Stein's Pass, Lordsburg and Shakespeare. There are located in this county several hot and mineral springs, the best known being at Faywood, where a commodious hotel has been built. The southern part of the Gila forest reserve covers the northwestern part and from Silver City starts the principal road into the reserve and to the Mogollon and Cooney mining districts. The county has a fine public school system. The county seat is



BIRDS-EYE VIEW OF SILVER CITY.

Silver City.

Its location, protected on all sides by high hills, its dry atmosphere, and its almost constant sunshine, render this town a pretty and healthy residence place. Nine miles east of Silver City is Fort Bayard, where the United States government has located the Army general hospital for the treatment of tuberculosis. The government having put its stamp of approval, after careful investigation, upon this climate for the cure of its soldiers and sailors, many other health seekers of late have been attracted to Silver City and surroundings. The census of 1900 gave Silver City a population of 2,735 and Silver City precinct a population of 2,971 persons. The present population is 3,000. It is a well built town of brick business blocks and many nice brick residences. It has a good supply of water, both for domestic use and for fire protection. Its merchants are modern and progressive and heavy stocks of goods are carried because the city supplies a large area of prosperous country. Two weekly newspapers are published, *The Enterprise* and *The Independent*. The public school system is very good, and there is also located here one of the Territorial normal schools, with a competent corps of teachers. Another educational institution that does very good work is the Academy of Our Lady of Lourdes for girls. The city has an electric light plant and a telephone system that reaches out to all the important towns and mining camps surrounding it. There are several substantial church buildings of various denominations. There is one national bank and one savings bank here. There are also good hotels. The city had two smelters built during the present year. The industries of the surrounding country are stock raising and mining. Twelve miles to the south is the Burro mountain mining district containing principally copper ores and having a smelter, and also producing much of the turquoise sold in the United States. Nine miles north is located Pinos Altos, one of the oldest gold mining camps of the Territory. Nine miles east are Fort Bayard and the town of Central, while sixteen miles east are located the mining camps of Santa Rita, Hanover and Fierro, in the center of big copper and iron ore deposits. The climate of this section makes it practicable to carry on mining every day in the year, both on top and underground.



THE GILA VALLEY, GRANT COUNTY.

St. Joseph's sanitarium under the care and direction of the Sisters of Mercy, is situated on a high elevation in the western part of the town, and consists of two large brick buildings, containing about thirty rooms. There is also located here a county hospital.

Lordsburg

is situated at the junction of the Southern Pacific, the Arizona and New Mexico, and the Lordsburg and Hachita Railroads. With surroundings it now has a population of about 1,200. The town was founded when the Southern Pacific Railroad was built through southern New Mexico, and was made a division point by the railroad. It has a large round house, machine shops, an extensive yard of side tracks, coal bunkers, and two large oil tanks with a capacity of more than 3,000,000 gallons, as the Southern Pacific is using oil in most of its engines. There are several business houses, two of which do a jobbing trade. The town has an electric light and ice plant. There are three churches and a good public school building, and one weekly newspaper, the Western Liberal.

Leonard Wood County.

Area 3,952 square miles; population 10,000; assessed valuation in 1903, \$923,017. Post offices: Anton Chico, Casaus, Colonias, Conant, Cuervo, Fort Sumner, Guadalupe, Pastura, Pintada, Puerto de Luna, Salado and Santa Rosa.

The county is rapidly developing. Four years ago it did not contain a mile of railroad, telegraph or telephone line. It was practically isolated from the world and even from its neighboring counties. But since then the Rock Island and El Paso and the El Paso and Northeastern Railways have built into the county forming a junction at Santa Rosa and are part of the Rock Island line of the California system. With the railroads have come the telegraph, new towns, new settlers and new life. It is first of all a stock country. This year it produced 3,000,000 pounds of wool and the sheep on its ranges are estimated at 600,000. Some of the higher grade wools produced in New Mexico come from this county, the bulk being of Delaine-Merino mixture. Cattle raising is also an important business. About 10,000 Shetland ponies and about 10,000 goats are included in the wealth of the county. In the eastern



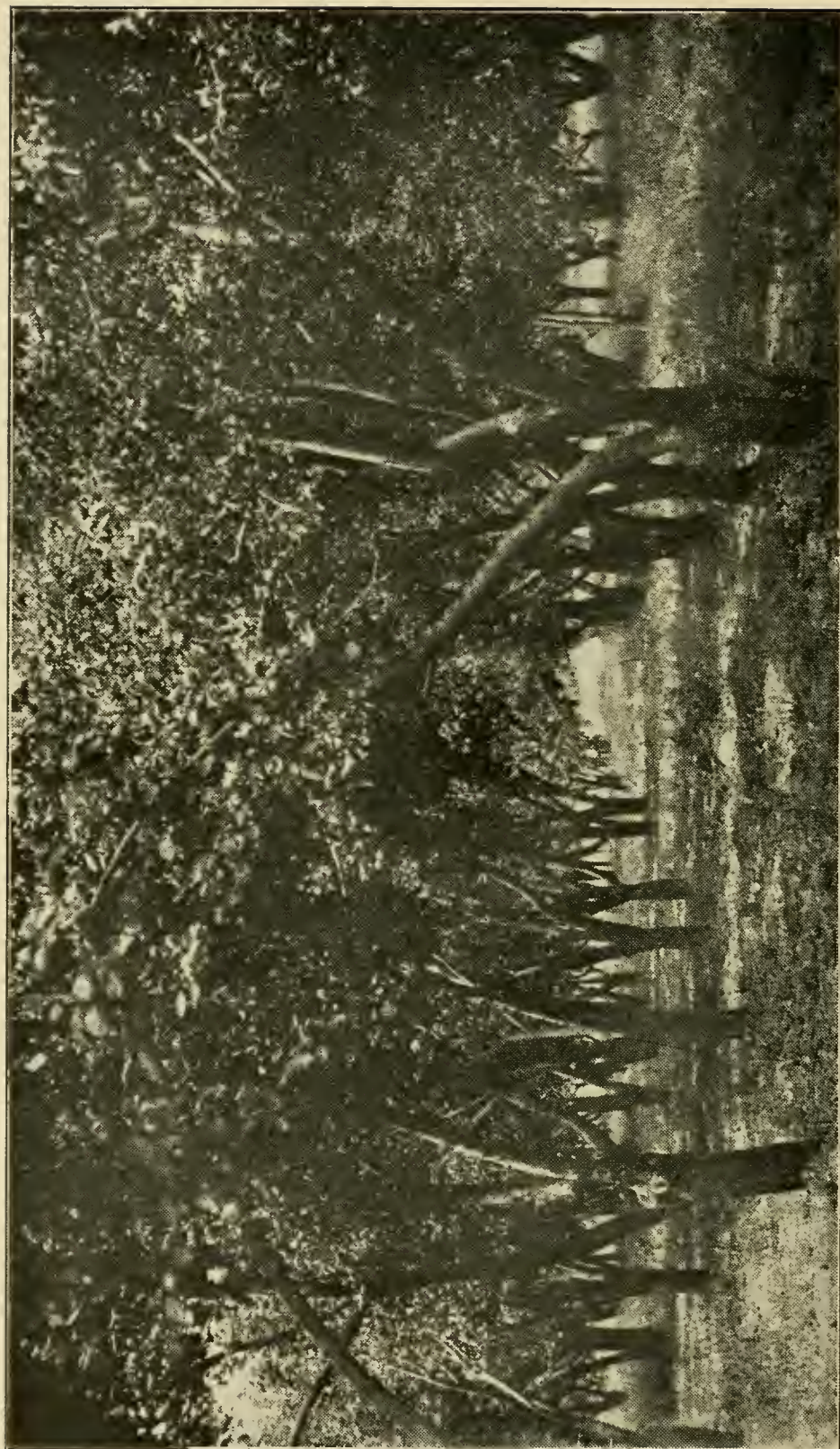
SUMNER RANCH, LEONARD WOOD COUNTY.

part are found many springs. Fully 2,000,000 acres are still subject to entry under the public land laws and the public range therefore is extensive. The Pecos river cuts through from northwest to southeast and in its valley are fertile agricultural lands. The northwestern portion is in the drainage of the Canadian. There are no modern or extensive irrigation systems.

The crops raised are alfalfa, fruit, vegetables and cereals. There are no developed mines but indications of gold and copper ores exist and oil rock is quite prevalent, covering a large area around Santa Rosa. Large deposits of good building stone and some pine and cedar timber are found. The county will always be a fine stock country, for it possesses vast stretches of grazing lands that are not likely to be invaded by the farmer, miner or factory hand. But it also has some good farming possibilities. The soil is very fertile and the building of storage reservoirs or the development of water by means of wind mills, gasoline engines or other power, will ultimately place large tracts under cultivation. The county seat is

Santa Rosa,

which consists of an old and a new town, the latter having been laid out by the Alamogordo Improvement Company since the advent of the Rock Island. Five hundred acres are embraced in the townsite, which is picturesquely situated on the Pecos river, and platted around a plaza, one side of the plaza being reserved for a modern hotel. The handsome Rock Island passenger depot faces the plaza, while the commodious freight depot is close at hand. It is a prosperous and growing railroad, trade and stock center, with a population of 1,200. It has two weekly newspapers, The Santa Rosa Star and the La Voz Publica, a bank, several churches, a good public school, railroad shops and round houses. The new town is situated at an elevation of 4,600 feet. The surrounding country, with the exception of the valleys along the river, is prairie and devoted to cattle and sheep raising. Along the valley splendid fruit, grain and vegetables can be grown with the aid of irrigation. The water in the Pecos river from the Santa Rosa crossing south is alkali, while 100 yards above the crossing it



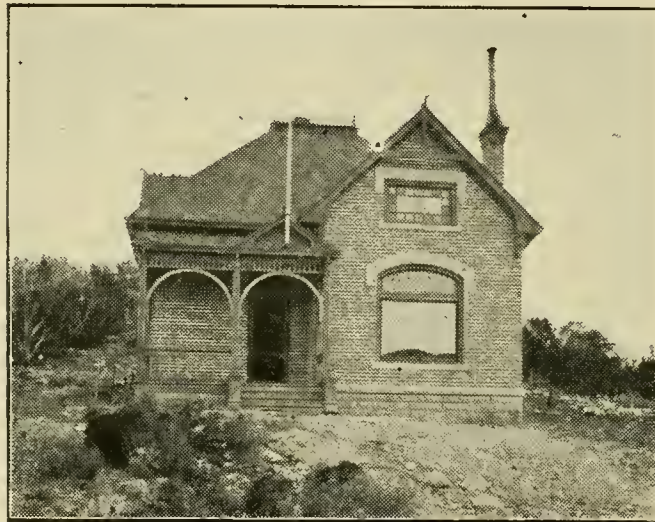
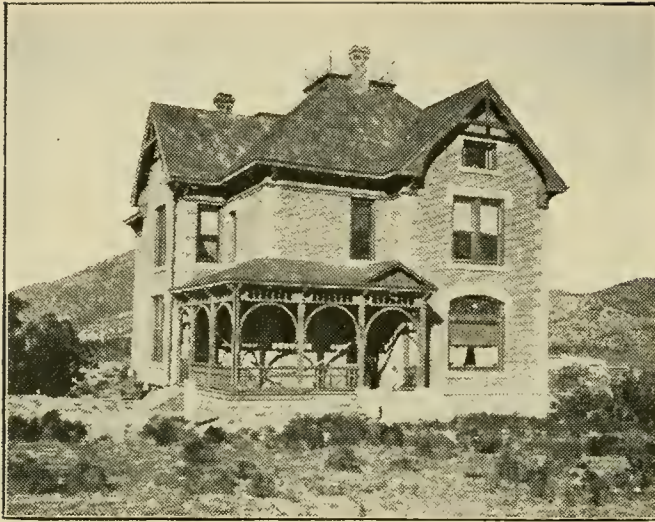
ORCHARD NEAR SANTA ROSA.

is fairly good. The alkaline character of the water below is caused by gypsum and alkali springs flowing into the river. A remarkable example of the well and wind mill method of irrigation now exists in the county. It is the Sumner ranch, eight miles north of Santa Rosa. When one rounds the point of a barren range of rocky hills and gets a glimpse of this fertile farm, one is tempted to believe that a portion of the rich agricultural section of Iowa has been transported to this sandy plain. The owners of the Sumner ranch are pioneers, and their success is likely to be followed up by many new comers. With a tributary territory, such as seems likely to spring up within the next few years, Santa Rosa would be prosperous if all other resources were removed. It is the division headquarters of the Rock Island and the El Paso Railroad. It is here also that the El Paso and Rock Island division of the El Paso and Northeastern Railway starts. Santa Rosa is sheltered by hills on both sides. It is subject to but few of the wind storms so likely to spring up at any time in the less protected uplands which make up the greater part of the county. The country surrounding is not without its scenic attractions and the climate is good. Santa Rosa sandstone quarries are already well known. In addition to its profuse local use, the superb sandstone, including solid red, white and gray colors and variegated hues, will develop a shipping industry of wide radius and profitable returns.

Lincoln County.

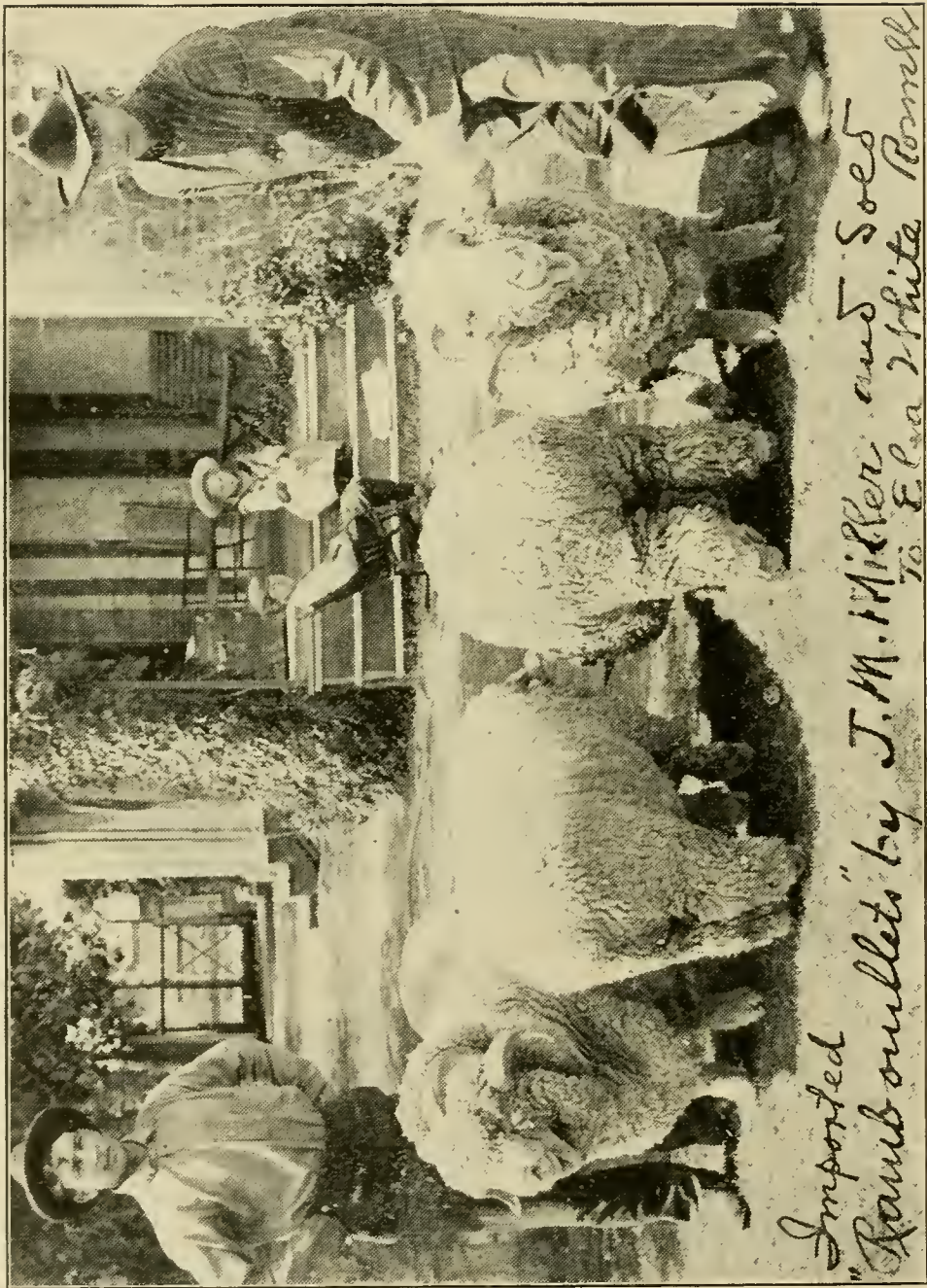
Area 4,594 square miles; population 10,000; assessed valuation in 1903, \$1,275,347. It is one of the oldest counties and out of its original area have been cut all the other southeastern counties. It is in late years, however, that it is seeing its greatest development through the extension of the El Paso and Northeastern Railway through its western part and the development of the coal fields at Capitan. Its post offices are: Alto, Analla, Ancho, Angus, Arabela, Bonito, Capitan, Carizozo, Coalora, Corona, Fort Stanton, Glencoe, Hondo, Jicarilla, Lincoln, Meek, Nogal, Oscuro, Parsons, Picacho, Richardson, Ruidoso, San Patricio, Torrance and White Oaks.

Comprising an area larger than that of the State of Connecticut, Lincoln county still has 2,200,000 acres subject to entry



WHITE OAKS, LINCOLN COUNTY, HOMES.

under the United States land laws. It lies within the drainage area of the Pecos river, although only the headwaters of several of its tributaries are within its lines. The Rio Hondo, one of these tributaries, is the largest stream and has as its tributaries, streams of clear, cool water known as the Bonito, the Eagle, the Little Eagle and Ruidoso creeks. The headwaters of the Rio Felix and the Rio Salado are also in the county. Nogal creek and a number of independent water courses on the west side of the White mountains, often dry during several months in the year, flow toward the Rio Grande. Storage reservoirs, to supplement the present primitive irrigation systems, would increase the cultivated area to 100,000 acres, but until new sources of water supply are discovered the greater part of the county will be given up to stock ranges and mining operations. The principal mountain ranges are the Sierra Blanca, rising to an elevation of 12,500 feet, the Capitan, the Gallinas, Carizo, the Jicarillas, the Tecolotes and the Tres Cerros mountains. Climate and soil are very suitable for the raising of fruit and grain. The orchards on the Bonito, the Ruidoso and other streams produce as fine fruit as can be raised in the United States. Good crops of oats, wheat and barley are raised without irrigation on some of the mesas south of Nogal. Even alfalfa is thus grown. Wheat yields thirty bushels to the acre, cabbage 30,000 pounds, beans 4,000 pounds, apples and pears 25,000 pounds and grapes 9,000 pounds to the acre. There are in the county 200,000 sheep, 85,000 cattle, 10,000 goats and 3,000 horses. Naturally it is a fine stock country. It is rich in coal as well as in the precious and base metals. The coal production of the Capitan mines is 100,000 tons a year. There are extensive undeveloped coal fields and iron ore deposits which presage future industrial prominence. It has produced several million dollars worth of gold, its principal mining camps being at White Oaks, Nogal and Jicarilla. Fine timber covers the mountain sides and the Lincoln Forest Reserve is situated in Lincoln County. There are two saw mills, one flour mill and a number of reduction and cement works. At Fort Stanton, the United States Revenue Marine Hospital Service maintains a sanitarium for consumptives, thus giving convincing official testi-



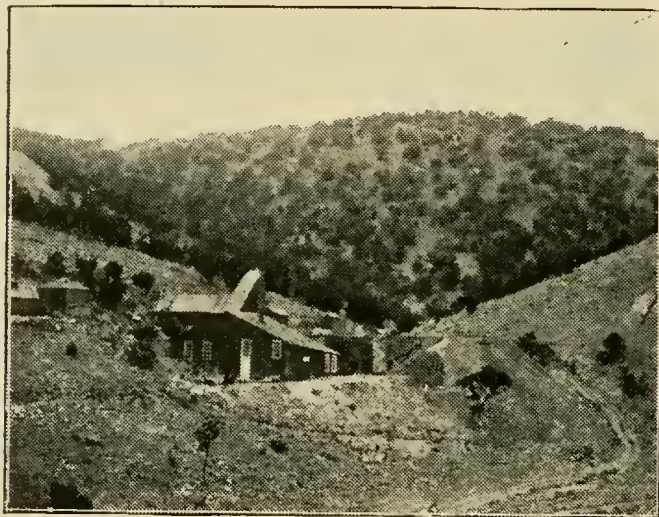
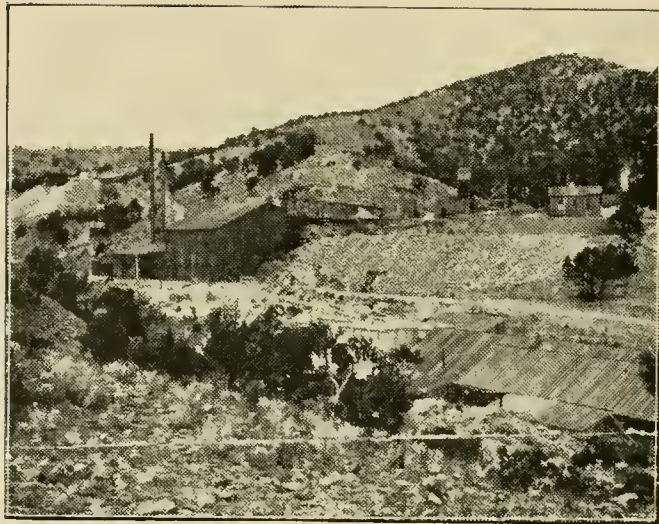
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THE PRIDE OF THE HERD.

mony to the superiority of the climate of that part of New Mexico. The largest town in the county is

Capitan,

which nestles in a spot surrounded on every side by rugged hills which rise on one side into the majestic Capitans and terminate on the other in the snow capped Sierra Blanca, the Pike's Peak of New Mexico. These rugged hills rising in broken line to meet the blue arch of heaven furnish everchanging scenery for the eye, as every glance reveals some new beauty to them. The ethereal blueness of the sky and the verdant hills in summer, or the brown and sombre of winter, form a contrast of colors more beautiful than ever portrayed on canvass. Where a little over five years ago stood one house and a small store, today there is a town of nearly a thousand people, with business houses, comfortable residences and everything that goes to make up a busy city. Since its settlement on the 3d day of March, 1899, Capitan has had a rapid growth when it is considered that it has grown to its present size entirely upon its own merit. The census of 1900 gave the precinct in which Capitan is located a population of 670; today Capitan and North Capitan, or Coalará, the latter being the coal mining town, have a population of 1,200. It is the location of the New Mexico Fuel Company's coal mines, where several hundred men are employed, and which has a pay roll of nearly \$10,000 a month. The fertile surrounding valleys produce crops of fruit, grain and vegetables, the range keeps thousands of head of cattle sleek and fat the year round, while the mountains contain riches of gold, silver, lead, copper and iron. Capitan is situated practically in the geographical center of Lincoln county and can be reached by a direct route from all parts of the county. Being thus favorably located, it is the supply point for the surrounding country, the headquarters for mining companies operating in that section and the trading point for farmers and stockmen. It is also a railroad point, being the terminus of the Capitan branch of the El Paso and Northeastern Railway, and freighting point for a large territory. Wagon after wagon loaded with hay, grain, wool, hides, etc., may be seen coming into the town daily, which return loaded with supplies for Fort Stanton, Lincoln,

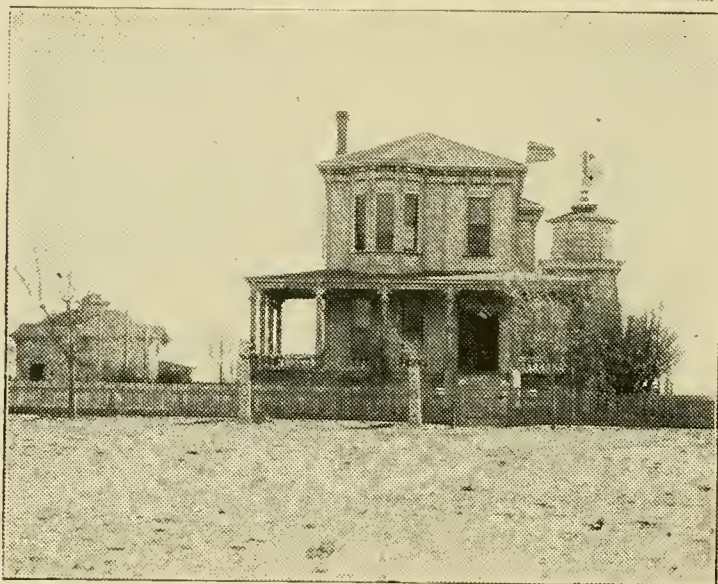


MINING AND OTHER SCENES IN LINCOLN COUNTY.

Bonito, Ruidoso, Picacho, Hondo and other points. Capitan, while progressing rapidly along commercial lines, has not neglected to keep fully abreast of the times in educational matters. No sooner had the town been established than a school district was platted and bonds to the extent of \$12,000 were voted to erect a suitable school building, and as a result Capitan today has a fine public school building. It has several churches and a weekly newspaper, the Capitan News. It is but a few miles from the sanitarium for consumptives at Fort Stanton.

White Oaks

is the best known town of Lincoln county, with a population, according to the census, of 804. It was located in 1880, and its fame rests upon its gold mines, principally the Old Abe and North and South Homestake. It is six miles from the El Paso and Rock Island Railway and twelve miles from Carizozo on the El Paso and Northeastern Railway, from where, once a day, a stage coach runs to the town. It has three churches and a \$3,000 school house, with good public schools. The elevation is 6,400 feet above the sea level. There are two hotels and a planing mill. Good water is secured from nearby springs. It is located in a beautiful valley or natural amphitheater in the White Oaks range of mountains, surrounded on all sides by high peaks covered with evergreen pine, cedar and juniper. While several large cattle, sheep and goat ranches are located in its immediate vicinity, from which it derives an extensive and profitable trade, the principal sources of the town's business, those which induced its establishment at this point, are mining operations. Something more than twenty-two years ago quartz veins, carrying visible gold in large quantities, were discovered in what are now known as the North and South Homestake mines, and out of these discoveries and the "boom" created thereby, grew the necessity for a trade center and White Oaks was the result. It is inhabited by an enterprising class of citizens, who believe in good schools, churches and respectable society. One weekly newspaper, the Outlook, is published here. The business houses would be creditable anywhere to a town of 1,000 or 2,000 people. No place can boast of a better climate.

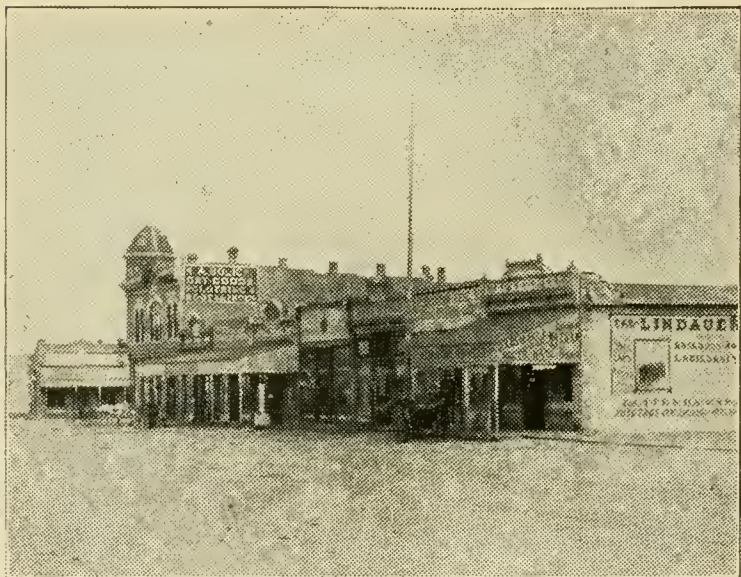


HOUSES AND DEPOT AT DEMING.

Luna County.

This is one of the new counties of the Territory having been organized in 1901. Its area is 2,946 square miles, population 4,000, assessed valuation in 1903, \$1,502,692. The post offices are: Cambray, Columbus, Cooks, Deming, Gage, Hermanas and Nutt.

Four-fifths of the area is still public land. The Mimbres river traverses it partly from north to south. There is running water along its upper course, but at and south of Deming it is an underground river. The county is primarily a cattle and mining section, although it has a fine rich soil, which can be made to produce abundant crops of all sorts as well as fruits of the finest quality through the medium of irrigation. About 5,000 acres are under cultivation, mostly along the Mimbres river, although around Deming there are small truck gardens irrigated from wells. It has good railroad facilities, the Santa Fe, the Southern Pacific and the El Paso and Southwestern passing through, the last named having also a branch line from Carizilillo to Deming where it forms a junction with the Southern Pacific and the Santa Fe. The total railroad mileage is 257 miles. The mean altitude is 5,000 feet and excepting Doña Ana and Eddy, no county in New Mexico has a milder climate. The winters are warm and snow is rare. The summers are pleasant and the nights are always cool. There is no malaria lurking in the dry air and Deming and surroundings are favorites with healthseekers. There are 300 or more days in the year in which there is not a cloud in the sky, while about forty-five days are recorded as partly cloudy and only twenty days as cloudy. As a cattle country Luna county offers superior facilities. The whole county is dotted with wind mills as good water is obtained from forty to fifty feet beneath the surface. Owing to the mild and equable climate and the abundance of water and grass, stockmen find it well adapted for breeding purposes. There are 100,000 head of cattle, all stock that will average up well. Poultry and bees should prove very profitable as good markets exist. There are four mining districts, Cooks, Florida, Victorio and Tres Hermanas, in which are located a number of well developed mines, several of which have yielded considerable rev-

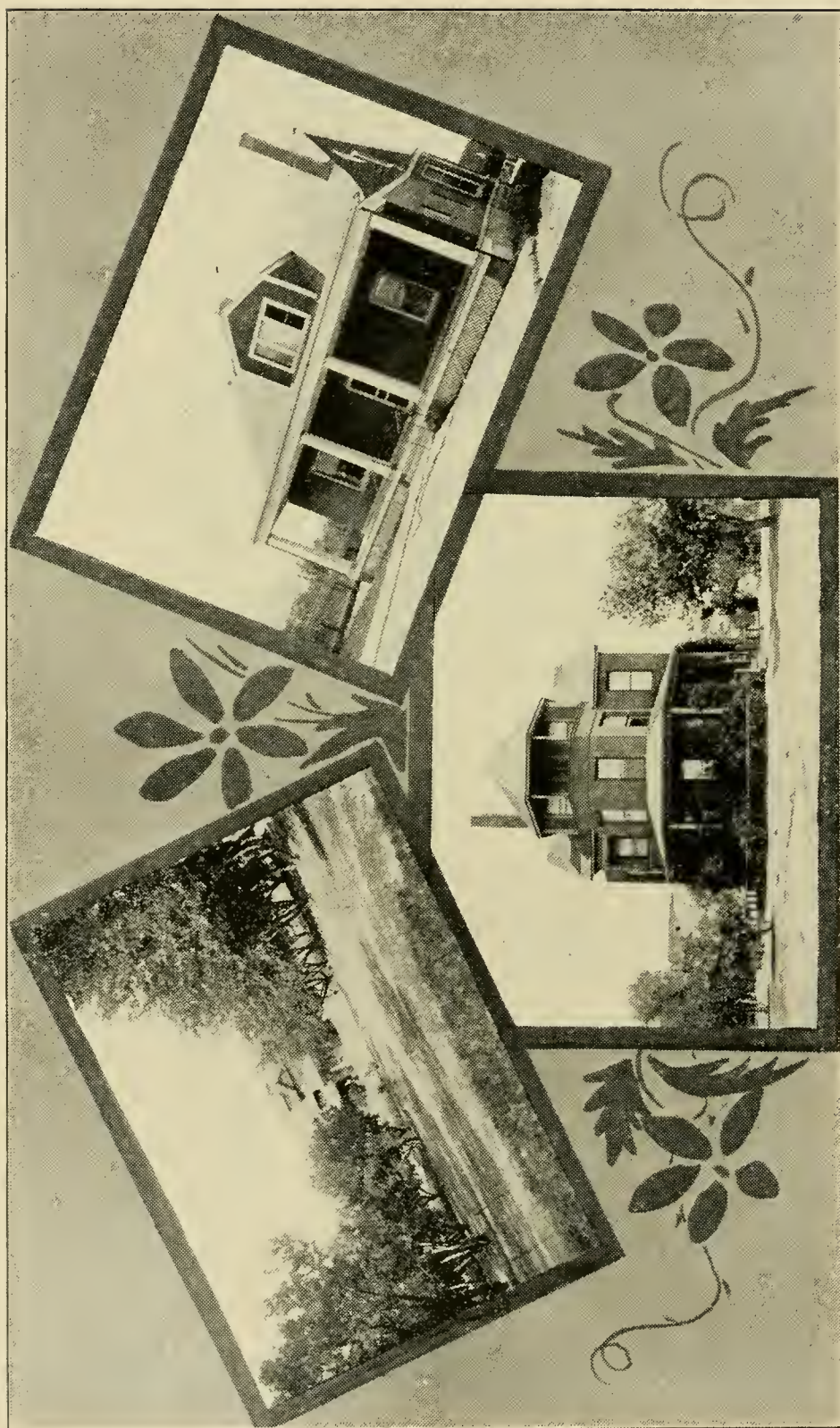


BUSINESS HOUSES AT DEMING.

enue. In the northwestern part, along the upper Mimbres, fine farms are located and good crops of alfalfa, wheat, corn, and orchard products are raised. Vegetables are produced in great abundance and of the best quality, including potatoes, sweet potatoes, beans, peas, beets, celery, onions, pumpkins, squashes, water melons and cantaloupes. The soil in the valley is a deep rich alluvium and needs only to be irrigated to produce heavily. The county seat and largest town is

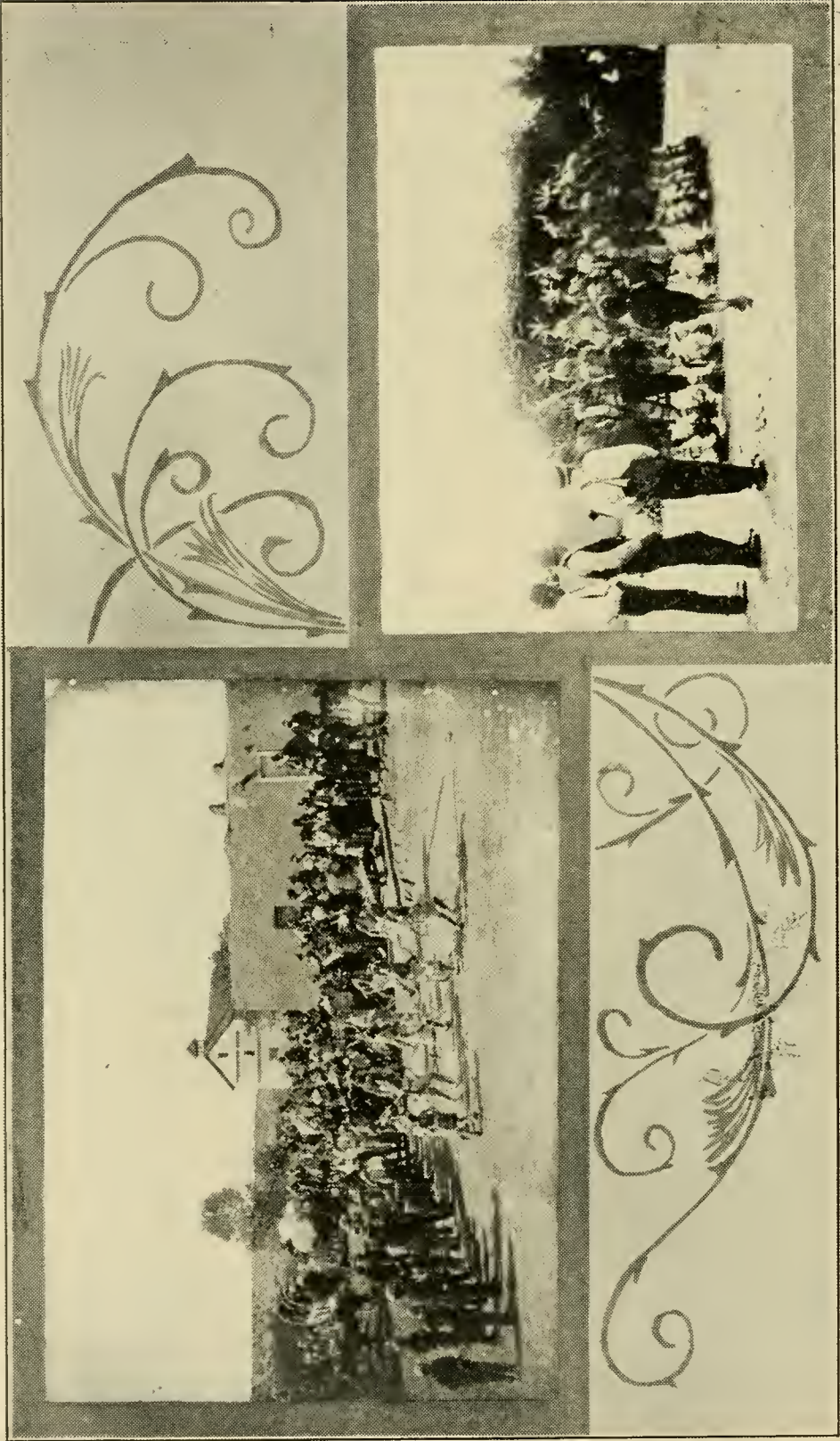
Deming.

It was founded in November, 1881. The Southern Pacific Railway, which was then building towards the Pacific coast, had just reached this point and was making preparations for the erection of shops, furnishing an incentive for the building of a city of tents and shanties on the plains. Six months later the Atchison, Topeka and Santa Fe completed its line to that point and formed a junction with the Southern Pacific and assured to Deming a position of prominence in that part of New Mexico. During the year 1882 settlers flocked in and several substantial buildings were erected. The plains round about also began to settle up, especially in spots where water was found. These new settlers were engaged in the cattle industry, and that industry has since then furnished a substantial support to the town. Prospectors located claims in the mountains round about and as a consequence the mining industry, too, is contributing to the prosperity of Deming and has helped to make it an important business center. About a year after the completion of the railroads above mentioned, a branch was built into the mining district surrounding Silver City, which was then enjoying a boom. In 1901, work was started on the construction of the El Paso and Southwestern Railway, the road being completed the year following, giving Deming direct railway connection with the great mining regions of southern Arizona and of Sonora, Mexico, and the distinction of being one of the two towns in New Mexico, namely Santa Fe and Deming, having three independent railroads. The town's location is well chosen, standing as it does on a broad, level plain at an altitude of about 4,300 feet, and surrounded with picturesque mountains. It always enjoys a cool, refreshing breeze in summer, tempering the heat of July



RESIDENCES AT SANTA FE.

and August and rendering the nights pleasant, while its southern latitude prevents severe cold in winter and assures mild, even temperature the year around. From a commercial standpoint it is the natural supply point of an extensive region furnishing supplies for the cattle ranches for miles to the east, west and south, and for the farmers of the Mimbres Valley to the north, while the people of the mining camps in the various parts of Luna and Grant counties to the west and to the north come to Deming for their supplies and to ship their ores. The water of Deming is noted for its purity and the abundance of the supply, the Mimbres river sinking into the gravel about twenty miles north of Deming and running beneath the surface in an inexhaustible stream directly under the town. The water is as pure and soft as rain water, thus making the town with its excellent railway facilities, a peculiarly favored spot for manufacturing enterprises. It has a population of about 2,000 and is incorporated under the village incorporation act. Merchandising is an important industry, there being a number of large, well equipped general stores in the town. Next in importance is the shipping of stock, about 100,000 head of cattle being shipped annually during the early summer months. Another industry bringing large returns is traffic in hay. The plains surrounding the town furnish thousands of tons of hay, and teams may be seen every day during the winter months hauling and loading it on the cars for shipment to the mining camps and to the towns east and west. A brickyard does a good business, as a greater part of the business houses built during the past few years are substantial brick structures, which add materially to its appearance. There is an ice plant and electric light works. The town has two banks. The Adelphi Club is an organization of about one hundred business men, which has fitted up elegant club rooms and which is doing good work for the growth of the town. The Deming Hospital is a territorial institution, established in 1897. There are two weekly newspapers, the Graphic and the Headlight. The public school system is very satisfactory. The present public school building is a handsome modern structure. The last school enumeration gave 902 persons of school age in the town, while the enrollment was 730, and the average daily

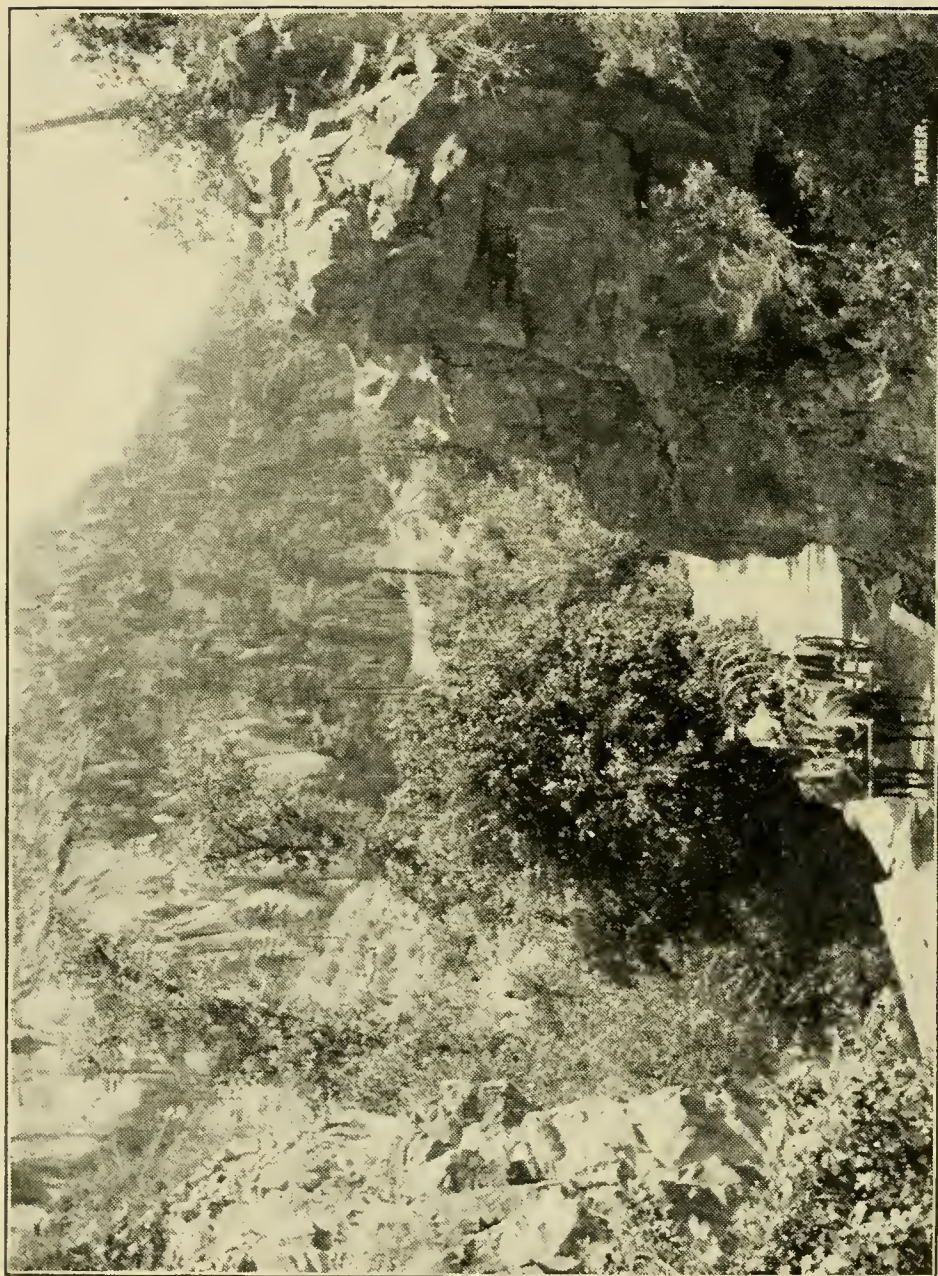


PUEBLO INDIAN DANCES.

attendance 500. Deming has a number of thriving church organizations. It is a health resort, and the many cures affected by its climate in lung and throat troubles are bringing annually more and more health seekers. The average winter days consist of crisp, cool mornings and evenings, but balmy at noon. Glorious weather to walk in, to drive in, to work in, to play in, to sleep in. There are very few days when children and invalids may not be out in comfort. The spring and fall days are pleasant, an unbroken combination of cool breezes and warm sun. Deming is blessed with sunshine, pure air and pure water; a combination that gives life, routs disease, nourishes hope, warms the soul and lifts up the heart, and making the city and surroundings an ideal refuge for health seekers.

McKinley County.

McKinley county was created in 1899. Its area is 6,377 square miles; population 6,500; assessed valuation in 1903, \$968,107. Of its area 900,000 acres are still subject to entry. Its main wealth is in coal mines, although a small area is under cultivation along the headwaters of the Zuni river and Pescado creek. There are about 100,000 sheep and 5,000 head of cattle. Over half a million tons of coal are produced annually, the mines being grouped around the county seat of Gallup. The Santa Fe Pacific Railroad cuts from east to west for about seventy-five miles and a branch road has been built from Thoreau into the Zuni mountains timber districts which are being exploited and add considerably to its business. A north and south railroad has been surveyed to be known as the Colorado and Gulf Railway and is to be built from Durango, Colorado, to Clifton, Arizona. In the eastern part are good copper indications, while around Manuelito considerable prospecting for oil has been done as the indications are very promising. South of Gallup are salt lakes which will ultimately be of commercial value. A portion of the northern part of the county is covered with lava. In the southeastern part are cliff dwellings and other prehistoric ruins. Excavations which have been made north of Thoreau have brought forth many relics which are finding their way to eastern museums. The Chaco Canon and the Pueblo Bonito, which are on the San Juan coun-

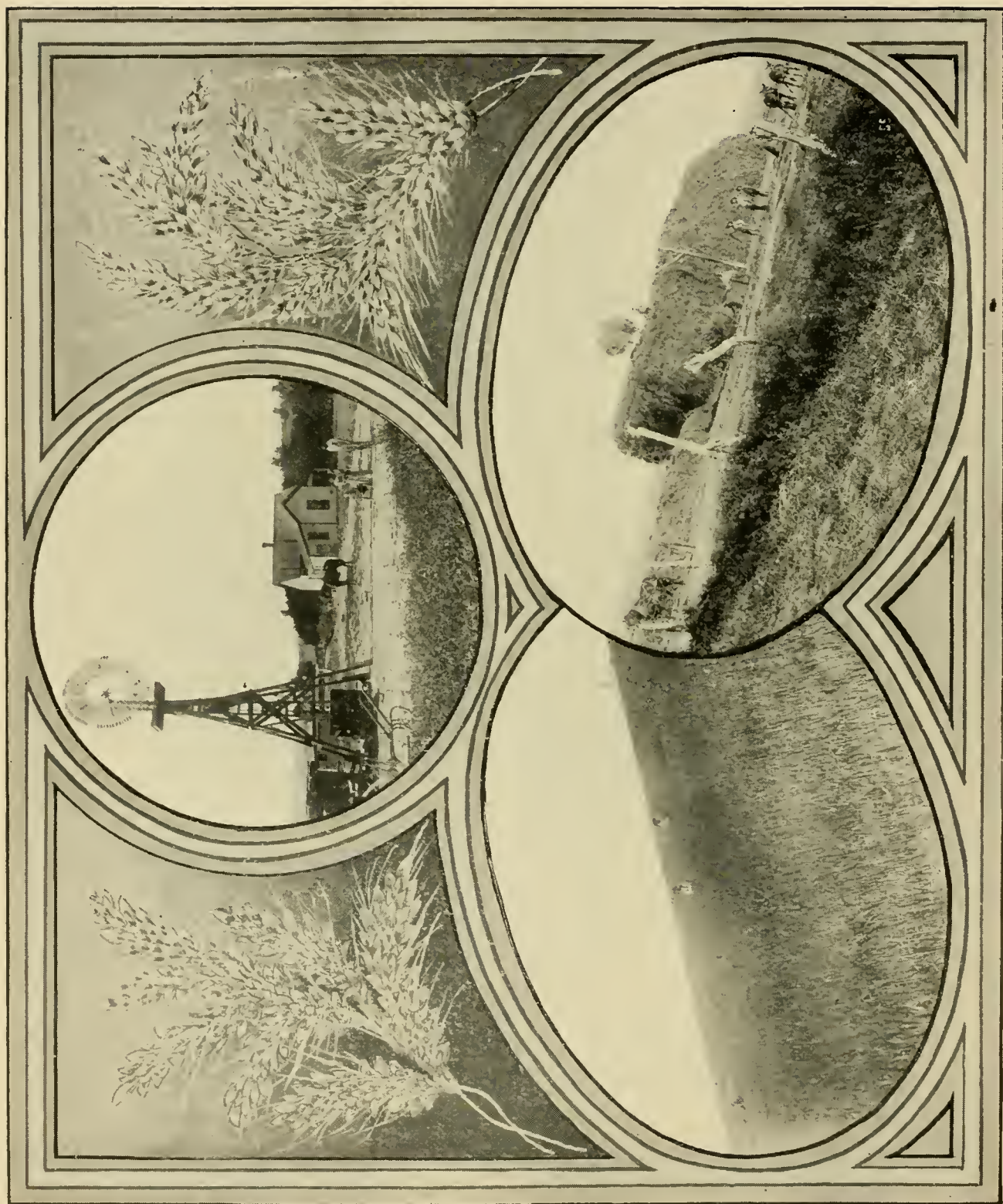


ON THE UPPER PECOS.

ty boundary line, are visited by many tourists and contain some of the best preserved cliff dwellings in New Mexico. Part of the large Navajo Indian reservation is in northwestern McKinley county. The Navajoes are wealthy in sheep and horses and are good workmen who are given employment on the railroads and in the sugar beet fields of Colorado. They are the finest blanket weavers among Indian tribes and their fame as silversmiths has spread far and wide. Part of the reservation is excellent range country, especially for sheep. Rich mineral indications, especially copper, also exist. In the southern part is the Zuni Indian reservation, the principal pueblo, Zuni, being one of the Seven Cities of Cibola and one of the most ancient and interesting pueblos in the southwest, whose annual dances attract more and more tourists every year. The government is building a \$250,000 reservoir and irrigation system for the Zunis who are husbandmen, their principal crops being Indian corn, beans, onions, melons and squashes. This system when completed will irrigate 6,000 acres of land. Many of the Zunis have small orchards of peach, apricot, apple, cherry and plum trees and grape vines. The majority of them have from ten to twenty acres under cultivation, while some as high as thirty to forty acres. The area of the reserve is 427 square miles and its population is 1,525. Just east of the Zuni Indian reserve is the Mormon agricultural settlement of Ramah on Pescado creek. Fort Wingate and its military reservation are fifteen miles southeast of Gallup. It is the only military post in New Mexico occupied at present. The following are the post offices: Blackrock, Clarkville, Fort Wingate, Gallup, Gibson, Guam, Manuelito, Ramah, Thoreau, Tohatchi and Zuni. The county seat is

Gallup,

on the Santa Fe Pacific Railroad. Gallup has at present a population of 2,500 people, including the families in the coal camps of the various companies at short distances from the city limits. As many other western towns, Gallup possesses a notable contingent of thrifty, brainy Scotch, English and Irish folk, who have added very materially to the rapid growth and solid development of the community. The climate is dry, fairly equable, and with few disagreeable features. The



high altitude prevents excessive heat. The town has ample religious and educational facilities. The public school system is very creditable. Thirty Indian trading stores on the reservation get their supplies from Gallup merchants or by the way of Gallup. The McKinley County Republican is the only newspaper, being published weekly.

Gallup is above all, a coal mining town and its coal industry is practically thus far only partly developed. Underneath the large region of which Gallup is the center, immense deposits of coal have been treasured by nature, awaiting the thrifty hand of capital to bring them up to the surface and make of Gallup one of the richest coal mining towns of the southwest. One mine alone, property of the Colorado Fuel and Iron Company, produced in one day (June 22, 1903), 1,550 tons of coal. The coal can be dug easily and there is practically no danger for the miner in the mines unless he should be exceedingly careless. No gas is to be feared. The coal is soft and of the best quality. The coal trade would naturally give the town a steady growth, but it is only one of the resources. Lying north is a field rich in oil bearing sand and shale, samples of which experts in Pennsylvania oil fields have pronounced to be very rich in crude oil (kerosene). A vein of fire clay, very free from iron and nodules, and of excellent quality, underlies the whole region, small and steady orders therefore being supplied to Arizona smelters. Pottery clay, brick clay, valuable sands, copper ore and other natural resources are found in the neighborhood. The greatest of all resources, however, lie above ground. The town is situated on the Puerco river. The whole valley is filled for miles with rich soil, needing only water to make it one great, rich farm. Nature has kindly made a reservoir site four miles above the town, which drains an immense watershed that would supply sufficient water for the irrigation of the whole valley. Only a moderate amount of capital is needed to dam safely this site and to set going agricultural life that would make Gallup a much larger city and also give handsome returns for the money invested. The city is lighted by electricity, has water-works, a telephone system and commands a good trade. It has broad, clean streets and many of its buildings are of brick and stone. It has telephone connection with Fort Wingate.



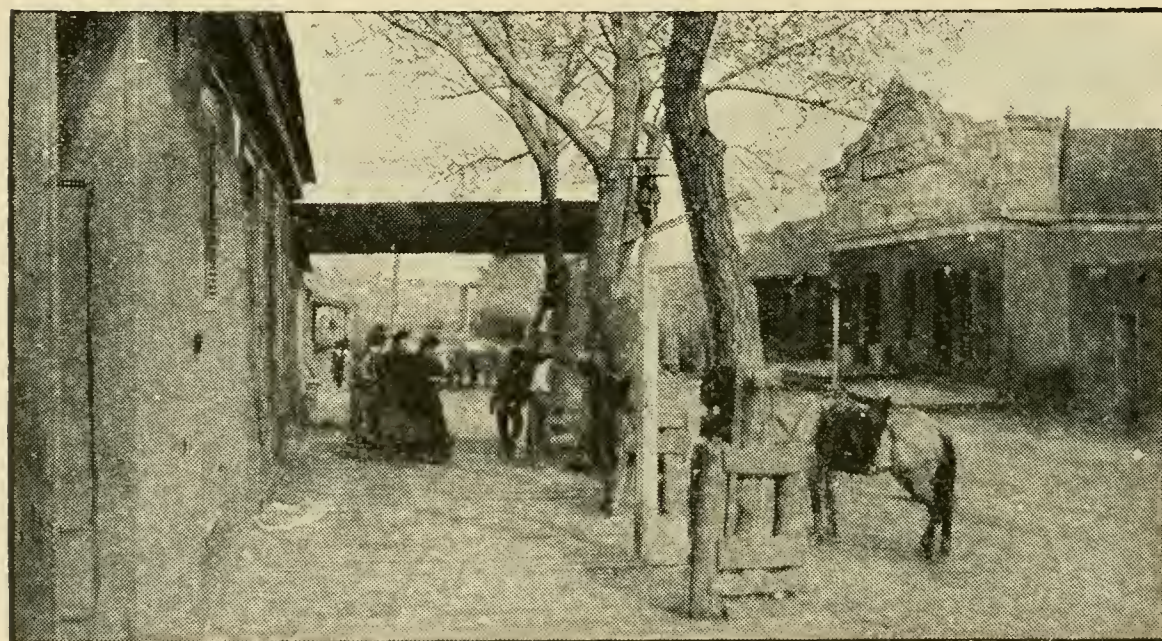
IN THE MORA VALLEY.

It has a large round house and is a division point on the Santa Fe Pacific Railroad.

Mora County.

Area 2,542 square miles; population 13,000; assessed valuation in 1903 \$1,175,823. Post offices: Chacon, Cleveland, Guadalupita, Halls Peak, Holman, La Cueva, Ledoux, Lucero, Mora, Ocate, Roy, Shoemaker, Wagon Mound, Sauz, Watrous, Weber.

Mora county's agricultural products are its mainstay and are not exceeded in value by those of any other New Mexico county. It can rightfully claim the honor of being one of the leading agricultural counties of the Territory. However, its stock interests exceed in value even its agricultural wealth. It is one of the four small counties, yet its area is greater than that of the State of Delaware, and 760,000 acres, or an area greater than that of the State of Rhode Island are still subject to entry. The county is mountainous, some of the peaks rising to an altitude of 13,500 feet. The hills are generally timbered and a portion of the Pecos River Forest Reserve is within its limits. From the main Sangre de Cristo range, broken by foothills and picturesque canons, the mesa extends gently sloping toward the southeast. It is almost entirely in the drainage area of the Canadian river, although the Pecos and the Santa Cruz rivers also rise within its boundaries. The Mora, a tributary of the Canadian, furnishes the principal supply for irrigation, although the Ocate and the headwaters of the Vermejo have a good flow. The irrigation systems are primitive excepting three reservoirs and canals built at La Cueva. There are many fine reservoir sites, however, and instead of 20,000 acres, the present area under cultivation, there could easily be three times that extent of country under ditch. The county has 35,000 head of cattle, 150,000 head of sheep and 5,000 goats. The raising and fattening of beeves is a growing industry around Wagon Mound, Watrous and other settlements. The principal crops are wheat, oats, alfalfa, corn, barley, rye, tomatoes and vegetables. Horticulture is a very successful pursuit. From the Mora Valley 2,000,000 pounds of corn and 300,000 pounds of oats are shipped annually. On the La Cueva ranch alone, 2,000 acres



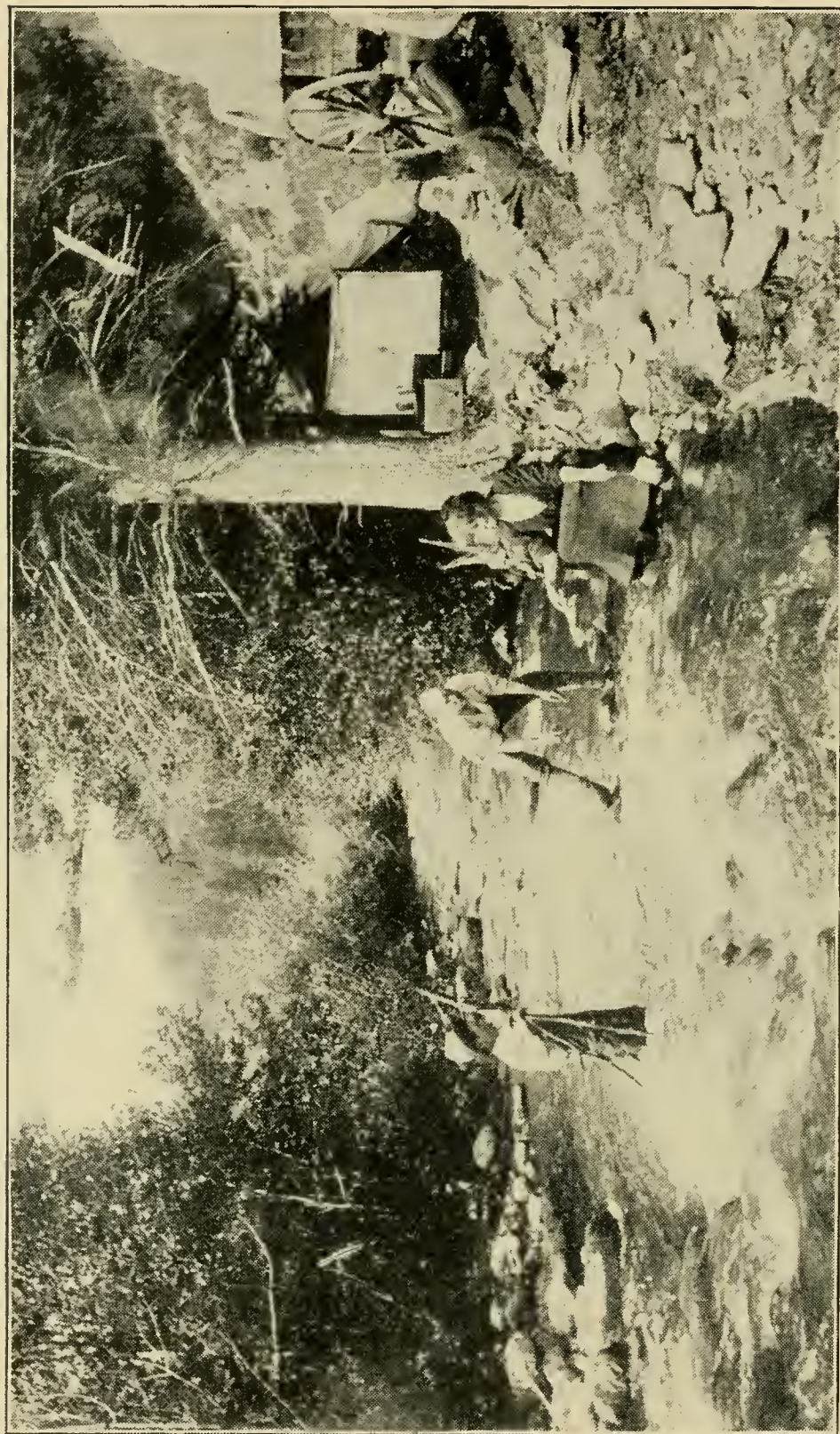
STREET SCENES IN MORA.

are under cultivation, all in cereals, alfalfa or fruit trees. The following are the principal agricultural valleys: The Mora and its extension, the Agua Negra Valley, is twenty-two miles long. In its narrowest place it is 400 yards wide for the length of about twelve miles, the other ten miles are from two to three miles wide. The Guadalupita Valley is five miles long and three miles wide along the Guadalupita and then runs ten miles to Lucero, averaging about a quarter of a mile in width. The Llano del Coyote Valley is about three miles long and one mile broad. The La Cueva Valley, not including the 10,000 acres of the La Cueva Ranch Company, has an area of about 5,000 acres. The Cherry and Watrous Valleys produce alfalfa principally, although a large quantity of grain is raised annually, being used mostly in fattening cattle, there being about 20,000 head of cattle in these two valleys. Besides these valleys, which all have irrigation systems, there are the Lower Cebolla, Buena Vista, Carmen, Gascon and other small valleys that are very productive. Mora has a great resource in the timber on the nearby mountains and seven million feet are annually shipped. Mineral indications of great promise exist in the mountains and the foothills. Development work is being done in the Rociada and Coyote districts. Mora will also some day figure as a coal producer. Clay for brick making, red and white sandstone and limestone exist in large quantities and of commercial quality. The county is crossed from north to south by the Santa Fe Railway for about forty miles. A railway has been surveyed from Las Vegas to Mora. The Dawson Railway cuts across the eastern part. The county seat is

Mora.

It was first settled in 1832 and is situated in a very pretty valley. It is surrounded by mountains on all sides except where the valley runs southward to Rociada and to San Miguel county. The Mora river supplies it with an abundance of water and furnishes power for several grist mills. The town has good roads, connecting it with outside points and is connected by telephone with Las Vegas. There are four general stores carrying large stocks.

Mora also has a nice court house, a Roman Catholic church,



IN THE CIMARRON CANON, COLFAX COUNTY.

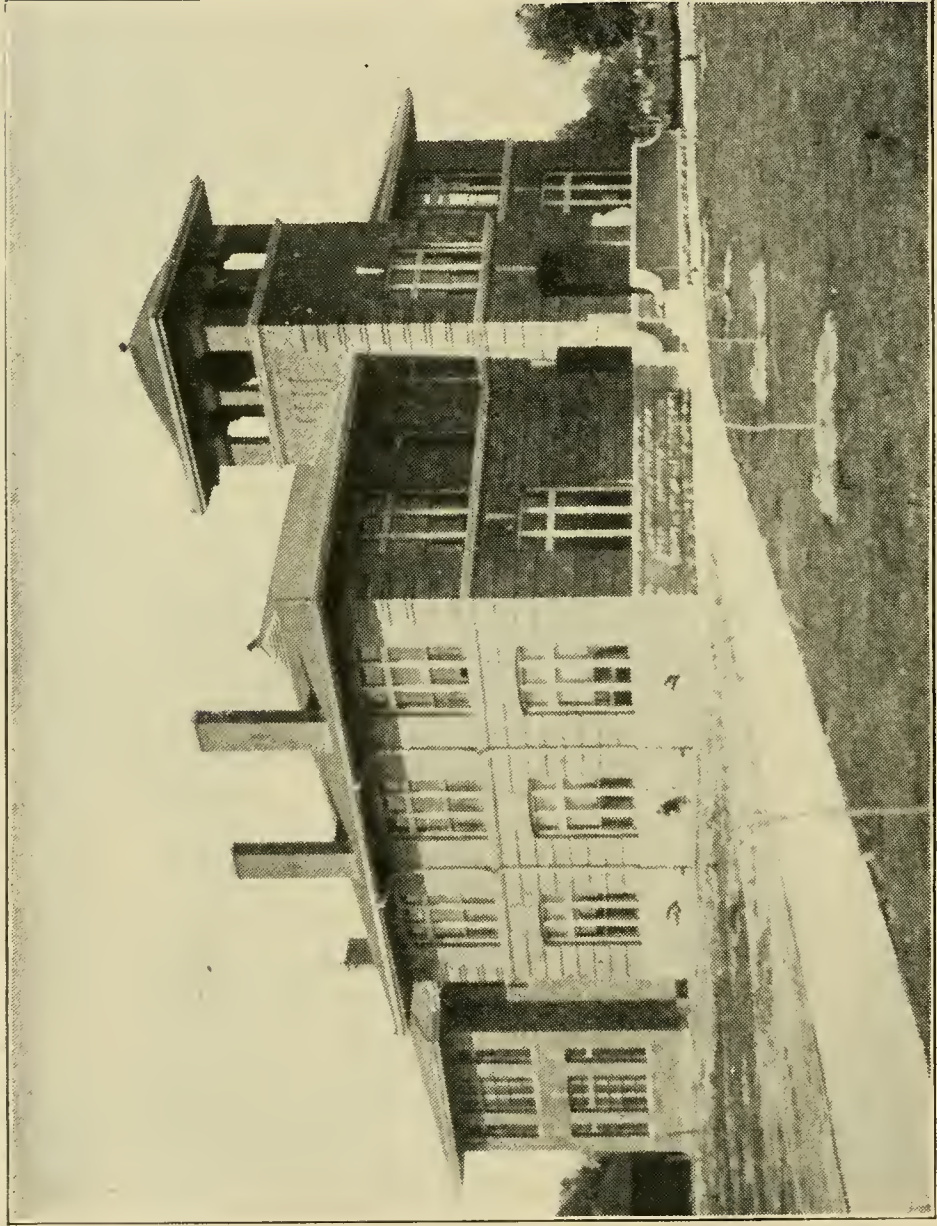
a Presbyterian church, a Catholic convent conducted by the Sisters of Loretto, who also maintain a school for girls, and quite a number of pretty homes. The population of the settlement is about 700. It is a pleasant summer resort, and many fishing parties from Las Vegas and other points go there to fish for trout. The Rio de la Casa which comes tumbling from the mountains, contains the speckled beauties. Promising mineral prospects are in the foothills nearby and health seekers often go to Mora for rest and health. All that Mora needs, to become a large and prosperous town is railroad connection with the outside world.

Wagon Mound

is the largest settlement, the census of 1900 giving Wagon Mound precinct a population of 895, while the population of the town itself is 500. Its elevation is 6,250 feet above the sea level, and it has a good climate. Mountain peaks make its surroundings especially picturesque. The principal occupation of its inhabitants is stock raising and merchandising. Wagon Mound is a prosperous community, with a good public school, which is housed in a modern \$5,000 building. The enrollment of pupils is 250, many children from outside attending the schools. There are two large mercantile houses doing an extensive business. A weekly newspaper, *El Combate*, Spanish and English, is printed in the town, which also has two churches. Wagon Mound is situated on the main line of the Atchison, Topeka and Santa Fe Railway, and owing to its climatic advantages and beauty of surroundings is attractive to health seekers. It is a great wool and stock shipping point and the trading center for the Ocate and Mora Valleys. The railroad company has a large sheep dipping plant here. Several fine farms are in the vicinity and offer accommodations to health seekers.

Roy

is a town but a little over a year old and a station on the Dawson Railroad which runs from Tucumcari in Quay county, to the great coal fields at Dawson in Colfax county. The town has at this time about 300 inhabitants and is growing. There is a large wholesale mercantile establishment there and several smaller stores. A monthly paper, the *Roy Observer*,



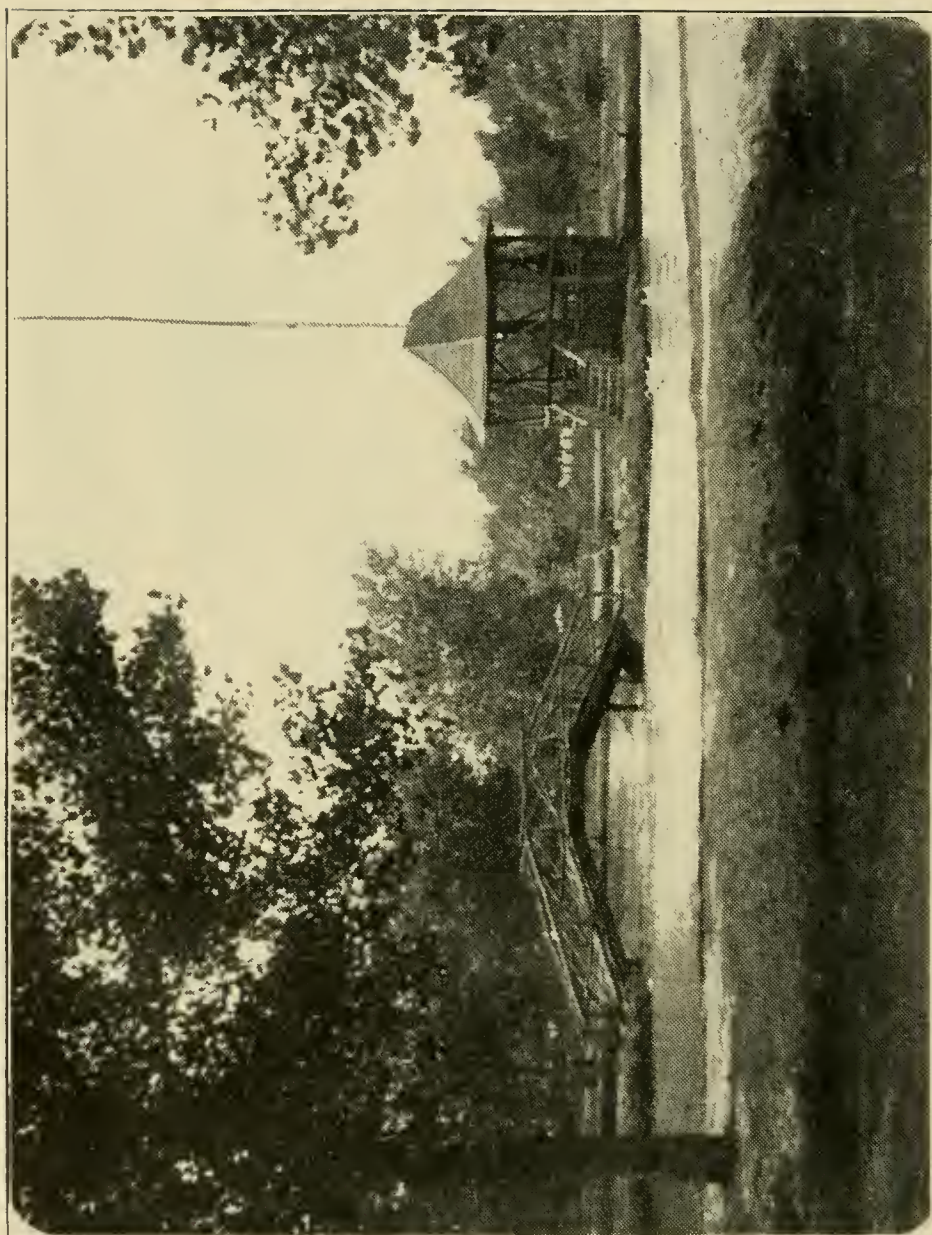
OTERO COUNTY COURT HOUSE AT ALAMOGORDO.

is published. The town is surrounded by prosperous stock ranches.

Otero County.

Area 6,870 square miles; population 7,500; assessed valuation in 1903, \$1,570,864; post offices: Alamogordo, Avis, Cloudcroft, Hereford, Highrolls, Brice, La Luz, Mayhill, Mescalero, Opal, Oran, Orange, Pine Springs, Russia, Three Rivers, Tularosa, Weed and Wright.

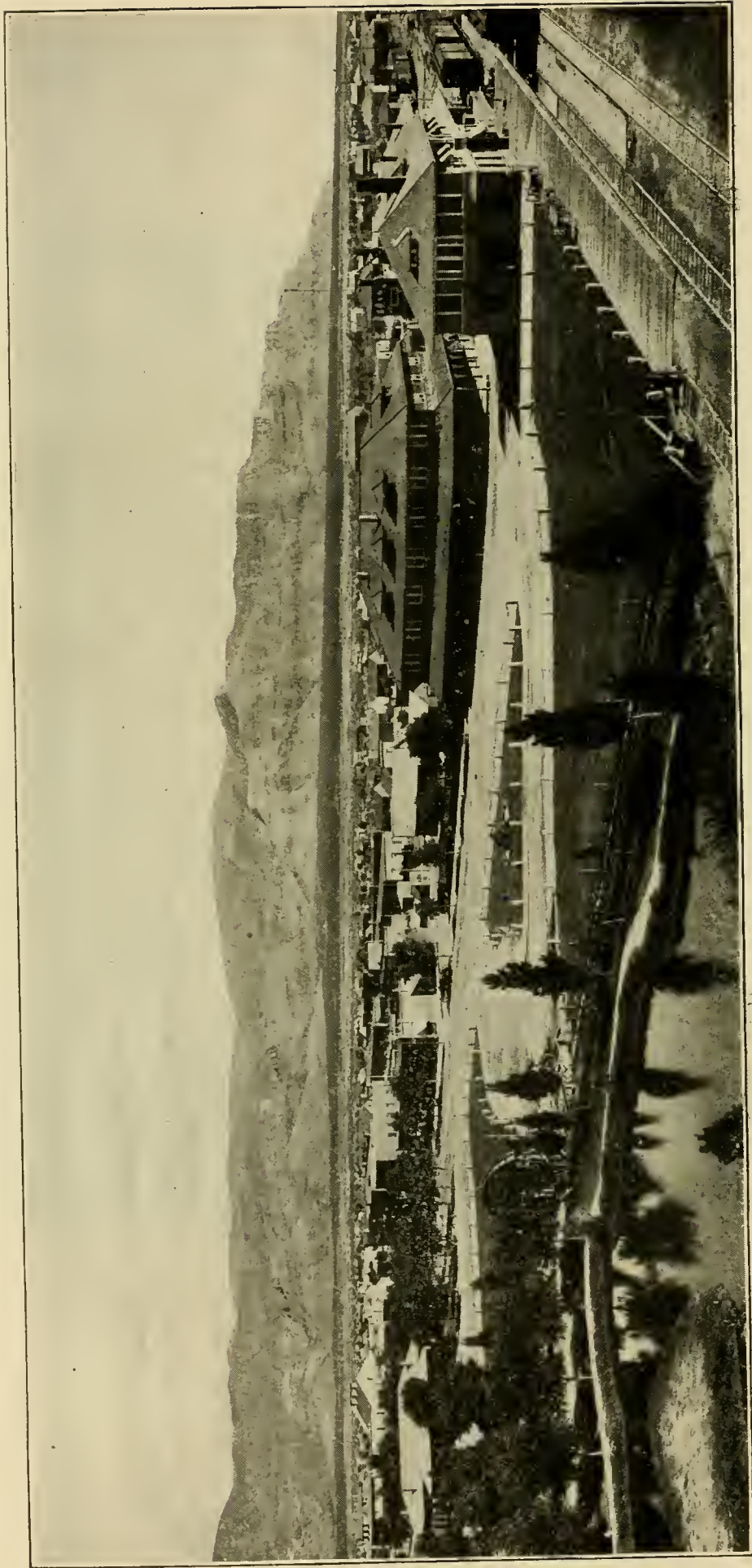
Excepting agricultural settlements at Tularosa, La Luz, Weed and a few other points, several scattered ranches and a few prospectors in the Jarillas and the Indians on the Mescalero reservation, Otero county, in 1898, was practically uninhabited. It was only five years ago that it was created a separate county, but since then it has grown rapidly in population and wealth. About 4,000,000 acres of its area are; however, still subject to entry. Over 2,500,000 acres are open range and 138,000 acres are included in the "White Sands" a deposit of gypsum. The White, the Sacramento, the Hueco, the Jarilla and the Guadalupe ranges are the principal mountain groups. The rivers are but small streams, periodical in their flow, and many, having no outlet, lose themselves in the sands. Tularosa, La Luz, Sacramento creeks and the headwaters of the Penasco, of Eagle creek and other brooks flow from the foothills down picturesque canons into the open valleys and tablelands. A considerable acreage is under cultivation, it being practical to raise crops in parts of the Sacramento and White mountains without irrigation. A dam across Rinconada canon near Tularosa which will impound sufficient water to irrigate 20,000 acres, is projected. The leading industries are stock raising, cattle, sheep and goats doing equally well; mining, especially in the Jarillas where gold, silver, copper, lead and turquoise deposits exist; lumbering, there being thousands of acres of virgin timber lands in the Sacramento mountains and manufacturing, there being lumber mills, tie preserving plants and railroad shops at Alamogordo. The Mescalero Apache Indian reservation and part of the Lincoln Forest Reserve are in the county.



PLAZA AT ALAMOGORDO.

Alamogordo,

the county seat of Otero county, 4,500 feet above the sea level, has experienced the most remarkable growth of any town in New Mexico. Five years ago the town was established and it has today over 4,000 inhabitants, broad streets, brick business blocks well stocked with merchandise, five churches, two large saw mills costing over \$200,000, an electric light plant and ice factory, steam laundry, planing mill, a water works system which cost \$50,000, a railway hospital, a woman's club, a park a mile long, a daily newspaper, the Alamogordo Journal, three weekly newspapers, the Alamogordo News, the Otero County Advertiser and the Alamogordo Journal, a fine railroad depot, a modern and commodious hotel, a fine public school building and a public library. It is the headquarters of the sixth judicial district. The general offices of the El Paso & Northeastern Railway are located here. Also the Southwestern Baptist College, whose promoters are improving a suburban tract and establishing a great educational institution. The streets are lined with young shade trees and here and there about the city are dotted beautiful parks. The Territory has appropriated \$25,000 for the erection at Alamogordo of an asylum for the blind on which construction work has begun. When five years ago, the Alamogordo Improvement Company was organized, the bare acres of the townsite were all that was visible. With a capital of \$500,000 and an unlimited fund of foresight and energy the company began work. The original townsite purchase was 1,200 acres, and from the signing of the title deeds to the present time the company has expended in cash \$400,000, of which \$175,000 were for a city water system, \$115,000 for city and suburban irrigation, and the remaining \$110,000 for buildings, street and alley construction, and improvements for parks and other city purposes. The city water supply is brought twelve miles from springs in Alamo Canon, the last eight miles of the distance being piped. The system has a gravity pressure of 100 pounds to the square inch. The company platted its land into city lots and one acre suburban tracts, and has brought the waters to its irrigation system from La Luz canon, seven miles away.



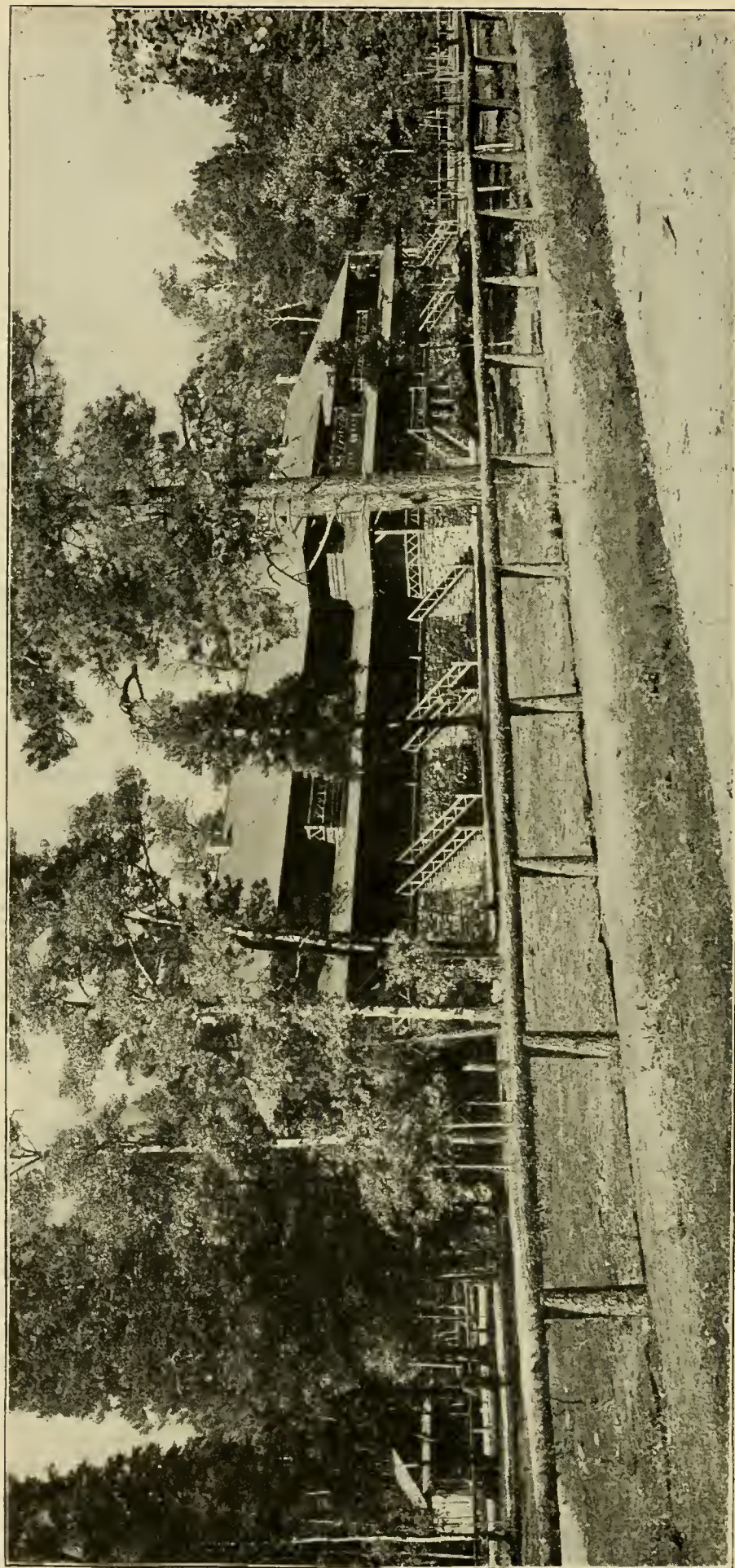
BIRDSEYE VIEW OF ALAMOGORDO.

A \$25,000 court house has been constructed, a \$30,000 railway hospital is to be built and a \$75,000 tie preserving plant has been erected. The town is the geographical and commercial center of a fine fruit growing section; has thousands of tributary fertile acres open to government entry; is on the main line of the shortest route between Kansas City, Denver and El Paso to California and Mexico and is within several hours' jaunt of the famous Cloud City, the areal summer and scenic southwestern resort, with which it is connected by the Sacramento Mountain Railway, one of the engineering wonders of the United States.

Tularosa

is situated on the El Paso and Northeastern Railway. Its latitude is about thirty-three degrees north and is at the base of the White Mountains, whose highest peak about twenty-five miles distant, rises 12,500 feet. It is supplied with water by the Tularosa creek, which is a mountain stream whose sources consist of several mountain springs, containing iron, magnesia and sulphur, on the reservation of the Mescalero Indians, flowing for about twenty miles through the canon dividing the White Mountains and the Sacramento range. These mountains are covered with pine, fir, juniper, pinon and balsam fir, all of which endow the atmosphere with healing balm beneficial to the lungs. To the westward are the San Andreas mountains, some forty miles away, showing several high peaks and an elevation of about 9,000 feet. Northwest are the Oscura mountains, about seventy-five miles distant. No finer scenery for the painter's brush can be found than is afforded from this dreamy town, in the Tularosa Valley, part of a vast level plain running northerly some sixty miles, and southerly to the Texas line and beyond for 100 miles and some fifty miles in width, a veritable paradise, if properly supplied with water, and this can be provided through storage reservoirs and pumping plants.

The temperature of Tularosa and vicinity ranges from the freezing point to ninety degrees Fahrenheit. This is the record for eighteen years. The thermometer reaches its highest point about the middle of August, when for about two weeks it reaches ninety-four degrees at noon, and remains



PAVILION AT CLOUDCROFT.

there until 3 p. m., when it begins to decline, and at night the breeze sets in from the mountains which renders a blanket necessary before morning. The large number of cottonwood trees which line the streets of Tularosa furnish a dense shade, which makes the warmest days pleasant and agreeable. The real winter usually lasts from about the 20th of December until the 10th of January, and then ice can be seen on the irrigation ditches from one-eighth to one-fourth inch thick. Tularosa being completely landlocked against the winds on the north and east by mountain ranges and spurs from the main ranges, never experiences those sudden changes of temperature which are so severe upon those suffering from throat and lung trouble. Fruits of the temperate zone grow to perfection in Tularosa. There is no record of the failure of the fruit crop since the settlement of the town in 1862. Grapes do well, bees do well, making honey of good quality. Alfalfa grows to perfection producing one to two tons per acre at each cutting and from three to five tons each year. Garden products are unexcelled. Tomatoes grown here are large and of good flavor. Watermelons and cantaloupes do well, the flavor of the cantaloupes being fine and the vines very prolific. The population in and near the town is about 1,200, the census of 1900 giving Tularosa precinct a population of 752. The town has a public school building. The Catholic is the oldest church in the town. The tourist and hunter will find many attractions in the vicinity of Tularosa. Six hours' ride will take the hunter among the wild turkey, blacktail deer and the cinnamon bear, and a day's drive in a buggy will carry the disciple of Walton to where the speckled trout are waiting, greedy for the angler's bait. The mountain ranges show indications of gold, silver, copper, iron and coal.

Quay County.

Area 2,805 square miles: population 4,000; assessed valuation in 1903, \$750,000. County seat Tucumcari. Post offices: Tucumcari, Dodson, Endee, Montoya, Moore, Quay, Puerto, Revuelto. The county was created by the 35th Legislative Assembly in 1903, and was named in honor of the late United States Senator Matthew Stanley Quay, of Pennsylvania. Guadalupe and Union counties gave up the area to create the



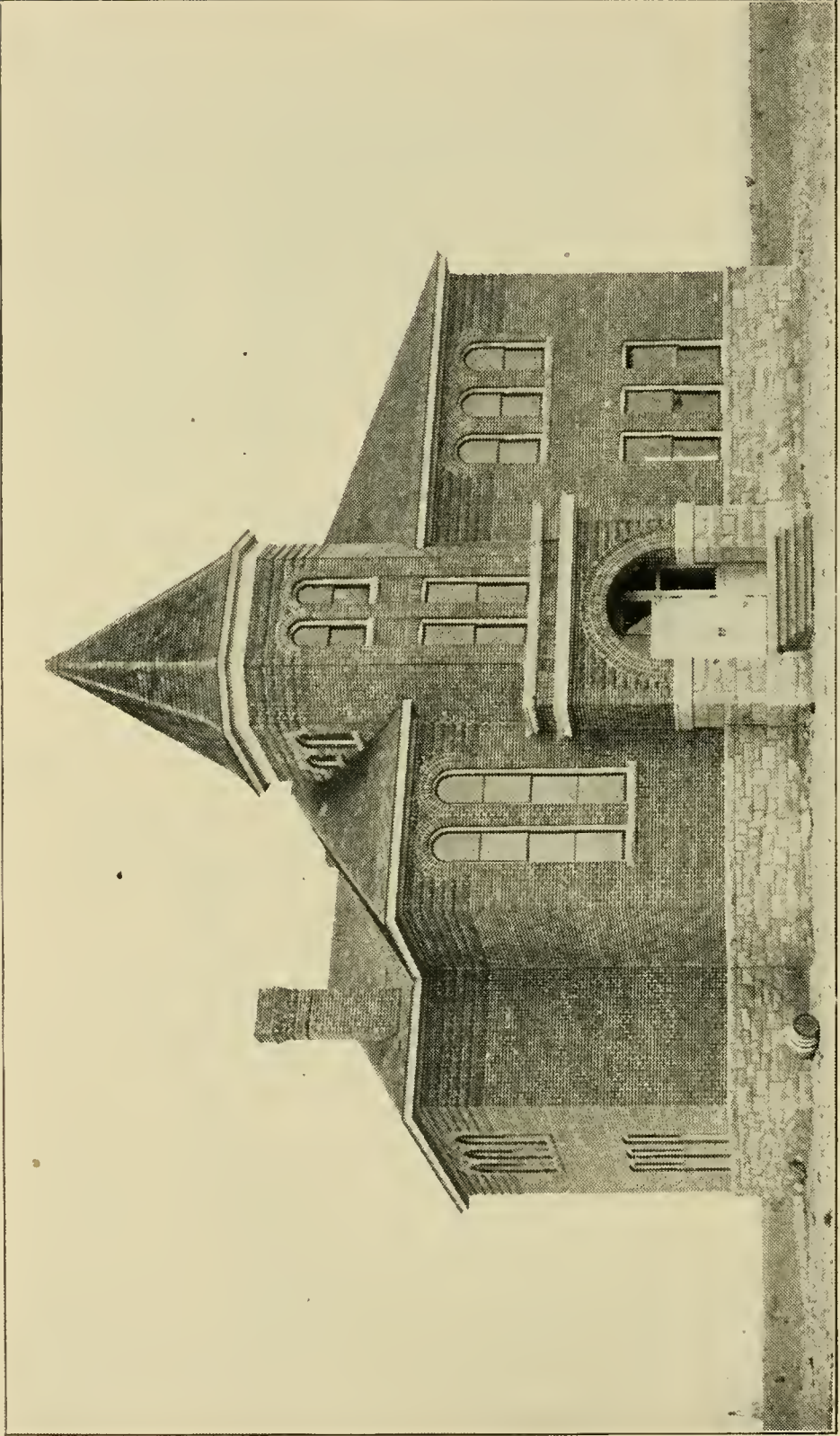
LAKE IN QUAY COUNTY.

county, the greater part coming from Guadalupe, now Leonard Wood county. The county seat was fixed at Tucumcari, a busy railroad center at the junction of the Chicago, Rock Island and Pacific Railway and the Dawson Railway. These two railroads traverse it and give ample railway facilities and have resulted in the coming of scores of new settlers. Its area is 1,795,270 acres, making it one of the small counties of New Mexico, although it is one and a half times as large as the State of Delaware.

Quay is classed as a plains county, but it is by no means entirely level, the surface being broken by hills and peaks, which in spots rise to the dignity of mountains, all being foothills of the great Rocky mountain system. The county is in the drainage area of the Canadian river in its northern part. Besides the Canadian the Pajarito is the principal water course. The Plaza Largo and the Trujillo are other streams, but are dry part of the year. Basins or water holes dot the plains, which are filled with water at times, forming lakes in the rainy season.

Being a grazing country, the stock industry flourishes. On its ranges are 150,000 sheep and 30,000 cattle. Tucumcari has become a great wool shipping center, the grade of wool produced being above the average. The mild winters, a good supply of water, and the railroad facilities make the county especially favorable to the stock industry.

Agriculture is also carried on upon a small scale, water for irrigation being supplied chiefly from shallow wells. The water can be raised by wind mills or with gasoline engines. On the Pajarito and around Tucumcari there are good farms. A beginning has been made in raising fruit, the climate being especially adapted to horticulture, apiary, chicken farming, and other branches of husbandry. Excellent building stone is found as well as clay for the making of brick. The climate, like that of the rest of the Territory, is a specific for lung and throat trouble. The winters are mild and the summers are cool, especially the summer nights. The altitude varies between 4,000 and 6,000 feet. The greater part of the land is subject to entry under the federal land laws, although around Tucumcari the land has been pretty well taken up by homesteaders.



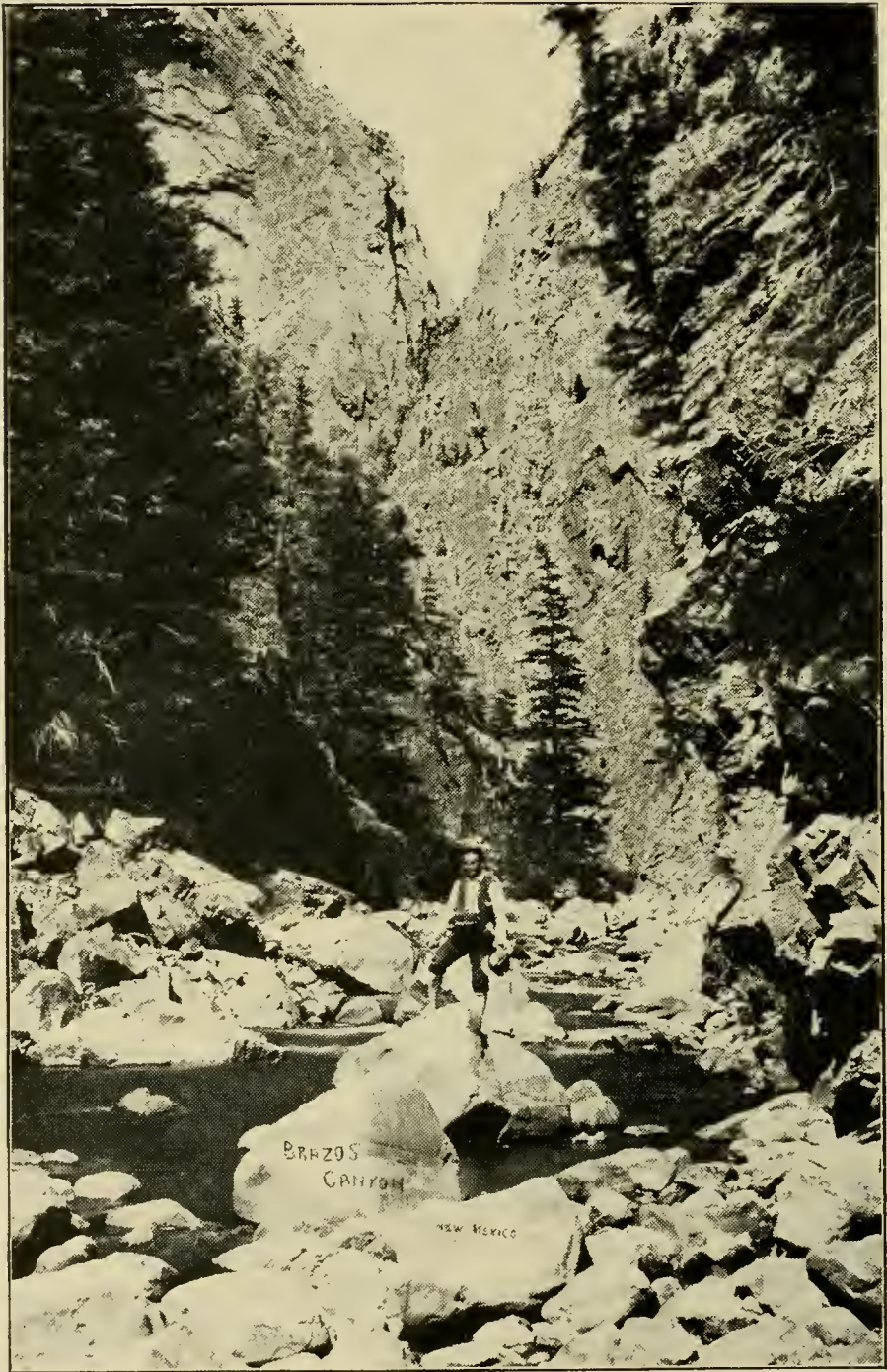
PUBLIC SCHOOL HOUSE AT TUCUMCARI.

Tucumcari

is the principal and only town. There are small settlements at Dodson, Endee, Montoya, Puerco and Revuelto, where post offices and stores are maintained. Tucumcari is a prosperous town situated at the foot of the Tucumcari mountain, at the junction of the Chicago, Rock Island and Pacific Railway, the Dawson Railway and the Choctaw-Amarillo extension to be completed in the near future. The surrounding country is a rolling prairie, broken and intercepted by small streams and the Canadian river, which flows through the eastern portion. Tucumcari has a population of 1,000. The town is but little over two years old and is making satisfactory growth. Several large new buildings have just been completed. Work is in progress upon a \$15,000 court house and jail upon which construction work has commenced and a \$10,000 school building was recently completed. The three railroads which form a junction here have drawn plans for a \$15,000 union depot as well as shops and a large round house. Many other smaller buildings including cozy homes, are in course of construction. Tucumcari has two newspapers, The Times and The Democrat. The town commands an extensive trade territory and is the center of a large sheep and wool industry, a wool scouring plant having been recently built.

Rio Arriba County.

Area 5,810 square miles; population 1900 census, 13,177; since then Espanola precinct of Santa Fe county has been added to it. Present population of the county, 16,500. Assessed valuation in 1903, \$981,685. County seat Tierra Amarilla. Post offices: Tierra Amarilla, Park View, Tusas, Espanola, Chamita, Cordova, El Rito, Canjilon, Vallecitos, Petaca, Hopewell, Chama, Monero, Lumberton, Dulce, Abiquiu, Alcalde, Coyote, Dixon, Embudo, Gallina, Lyden, Mariana, Rinconada, Truchas, Velarde and Rosa. It is the eighth largest county of the Territory. It has more than five times the area of the State of Rhode Island, thrice that of Delaware, a greater area than Connecticut, and is almost as large as Hawaii. Although a large part is covered by private land grants yet almost 2,000,000 acres are still subject to entry under the federal land laws.

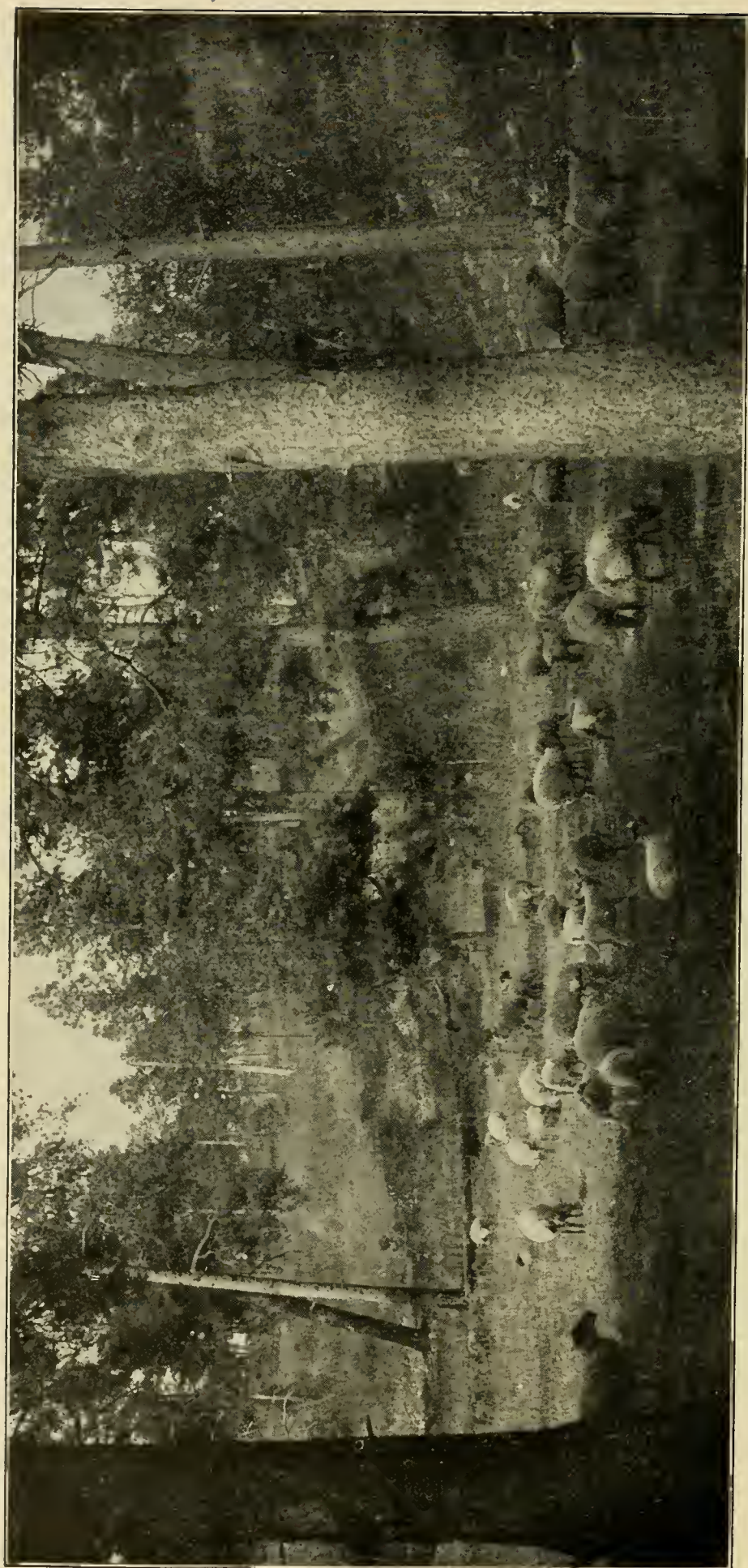


CANON ON THE BRAZOS, RIO ARRIBA COUNTY.

Rio Arriba is one of the richest of New Mexico's subdivisions, the census of 1902 showing that its agricultural wealth alone amounted to \$2,566,000. The surface is very much broken. The principal mountain ranges are the Cumbres, the Gallinas, the Jemez and the Cejita Blanca, a number of the peaks rising to an altitude of 12,000 feet. The mountains give a large drainage area and the streams, in consequence, at certain times of the year carry a large volume of water. As there are many good reservoir sites, a considerable portion of the water supply will at some future day be available for irrigation purposes, but at present most of it flows to waste, only about 50,000 acres being under ditch and 30,000 acres under cultivation. The county is in the drainage area of the Rio Grande, except that small portion west of the Continental Divide. The principal rivers are the Chama with about fifteen tributaries and the Rio Grande. Rio Arriba county has the dry, sunny mountain climate so much sought for by health seekers. About 140 miles of the Denver and Rio Grande Railroad traverse the county, in addition to about thirty-five miles of branch timber railroads. Stock raising, especially sheep, is the main industry. Next in importance is agriculture. Then comes mining, the camp at Monero producing 50,000 tons of coal a year. The Bromide, Hopewell and Tusas mining districts near Tres Piedras are very promising, copper, gold, silver, lead, platinum and mica being among the mineral products. Lumbering is also an important industry, about 50,000 feet of lumber being cut daily. The Jicarilla Apache reservation is in the county, covering 415,000 acres upon which are 830 Indians making rapid advance. There are many attractions for tourists, among them being the cliff dwellings of the Pajarito Park. Some of the settlements are among the oldest in the United States.

Tierra Amarilla

is the county seat and is situated in the beautiful Chama Valley, with pretty agricultural settlements around it, the principal of which is Park View. The population of Tierra Amarilla and contiguous settlements, including the charming settlement of Park View, is about 2,200. A weekly newspaper, *El Republicano*, is published here. Tierra Amarilla and Park



SHEEP IN RIO ARRIBA COUNTY.

View boast of several fine business houses and are also the center of a wealthy stock country. At El Rito, the Territory will build a reform school. At Espanola, La Luz, a weekly newspaper is published. The town is a busy trade center. San Juan is a large Indian Pueblo. Chamita, near San Juan, is considered by some historians the oldest white settlement in New Mexico.

Chama

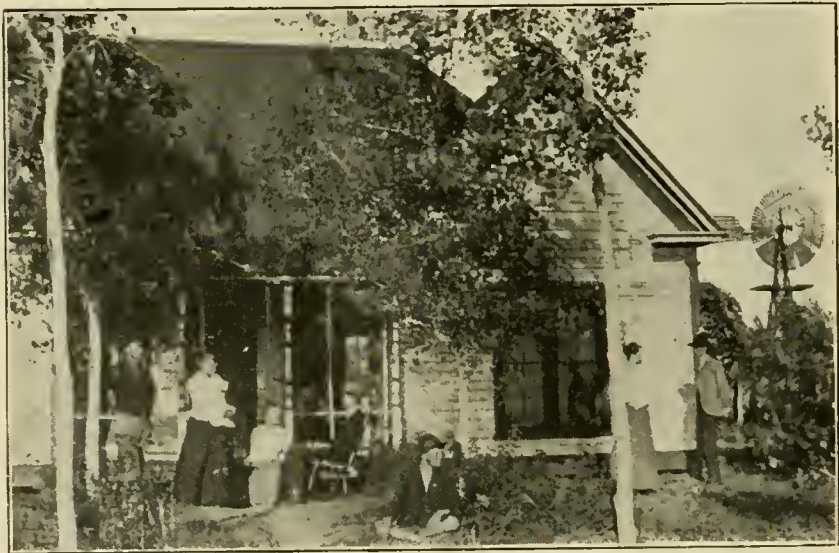
is a modern railroad town on the Denver and Rio Grande Railroad on which it is a division point, and is a shipping point for the wool, lumber and other products of the northern part. It has public schools and churches. Near the town are stone quarries, from which the stone for the Colorado capitol at Denver was taken. Ranches and stock ranges surround the town and nearby are several fine trout streams and good hunting grounds. The Denver and Rio Grande Railroad maintains here big dipping vats for sheep. The population is 500.

Abiquiu

is one of the oldest settlements in the Territory and is centrally located in the valley of the Rio Chama. For many years it was an outpost against hostile Indians and many expeditions against the Apaches and Utes were organized there. It has an interesting history and was, up to within thirty years ago quite important in the county. It is today a good trading center. There are numerous other settlements which are supported by agriculture, horticulture and stock raising; they are found in the Espanola Valley on the Rio Grande, in the valleys of the Chama and tributary streams, and are increasing in population and prosperity steadily.

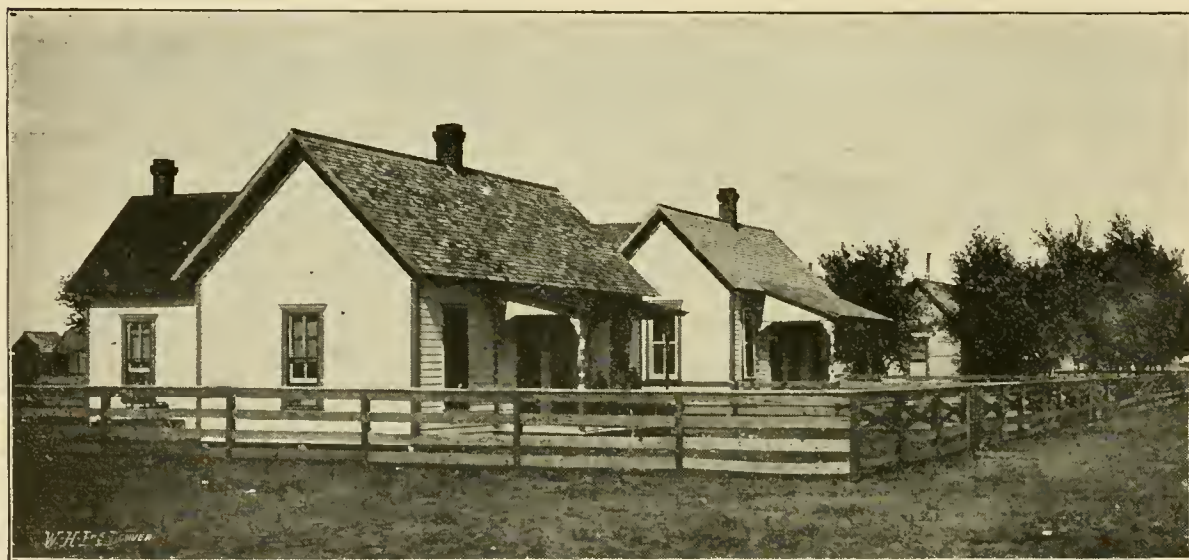
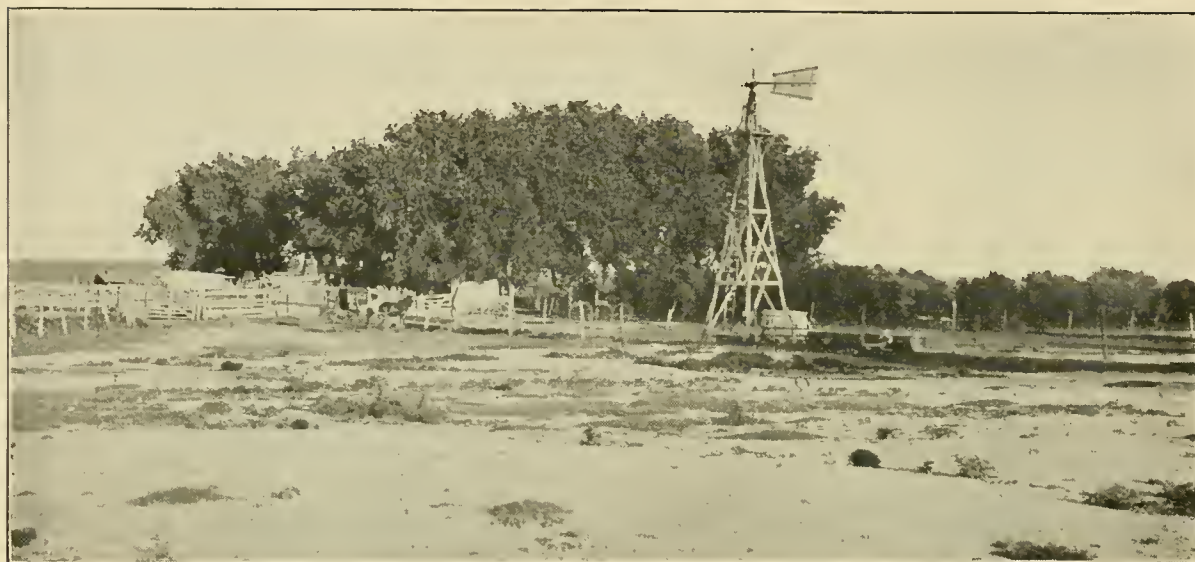
Roosevelt County.

Area 3,110 square miles; population 4,500. The census of 1900 gave this area a population of 383. Assessed valuation in 1903, \$600,000. County seat Portales. Post offices: Arch, Bethel, Elida, Floyd, Langston, Portales, Stockton and Texico. Roosevelt county, named after the president, was created by the 35th Legislative Assembly in the year 1903. It is distinctively a plains county, and, excepting a fraction of the northwest



ROOSEVELT COUNTY SCENES.

corner, is rectangular in form. It measures sixty-four miles from east to west and fifty-four miles from north to south. It is the seventeenth in size in New Mexico and yet it covers an area three times that of the State of Rhode Island. Its western boundary is approximately along the divide or watershed between the Pecos river on the west and the Brazos river on the east. The principal valley crosses the county from a point on the west boundary line north of the center to a point a little south of the center of the eastern boundary line, so that the entire county is traversed in northwesterly southeasterly direction by a broad valley, which has come to be known as the "Inland Valley." It is for the greater part of its length skirted on either side by low hills, and bears all the indications of having been at one time the course of a broad flowing stream of water. There are at intervals along the course of this valley springs, from which flows a constant stream of pure non-alkaline water. Particularly is this true near the head of the valley, where there is a considerable number of such springs. The course of the drainage for the flow of waters divides at a point a little north and west of the center. The one part forms the head of what is known as the Black Water branch of the Brazos river, and the other forms the headwaters of the Yellow Horse branch of that stream. Numerous draws grade into the inland valley at various points along the entire length, coming from different directions and distances, covering the entire county with a net work of drainage. These draws and valleys are for the most part broad and the grade from the higher land is so slight that in passing over the surface, the descent or the ascent is scarcely noticeable. To either side of the principal valley and beyond the narrow range of sand bluffs the surface broadens out into the wide plains, upon which the native grasses grow in abundance, providing pasture for cattle, sheep and horses, upon which they feed the year around. From those pastures great numbers of these animals are shipped and driven annually both to the market and to the northern states for feeding. Because of the mildness of the climate and the abundant growth of grasses, the region embraced within the limits of Roosevelt county is rightly considered a part of nature's breeding ground.

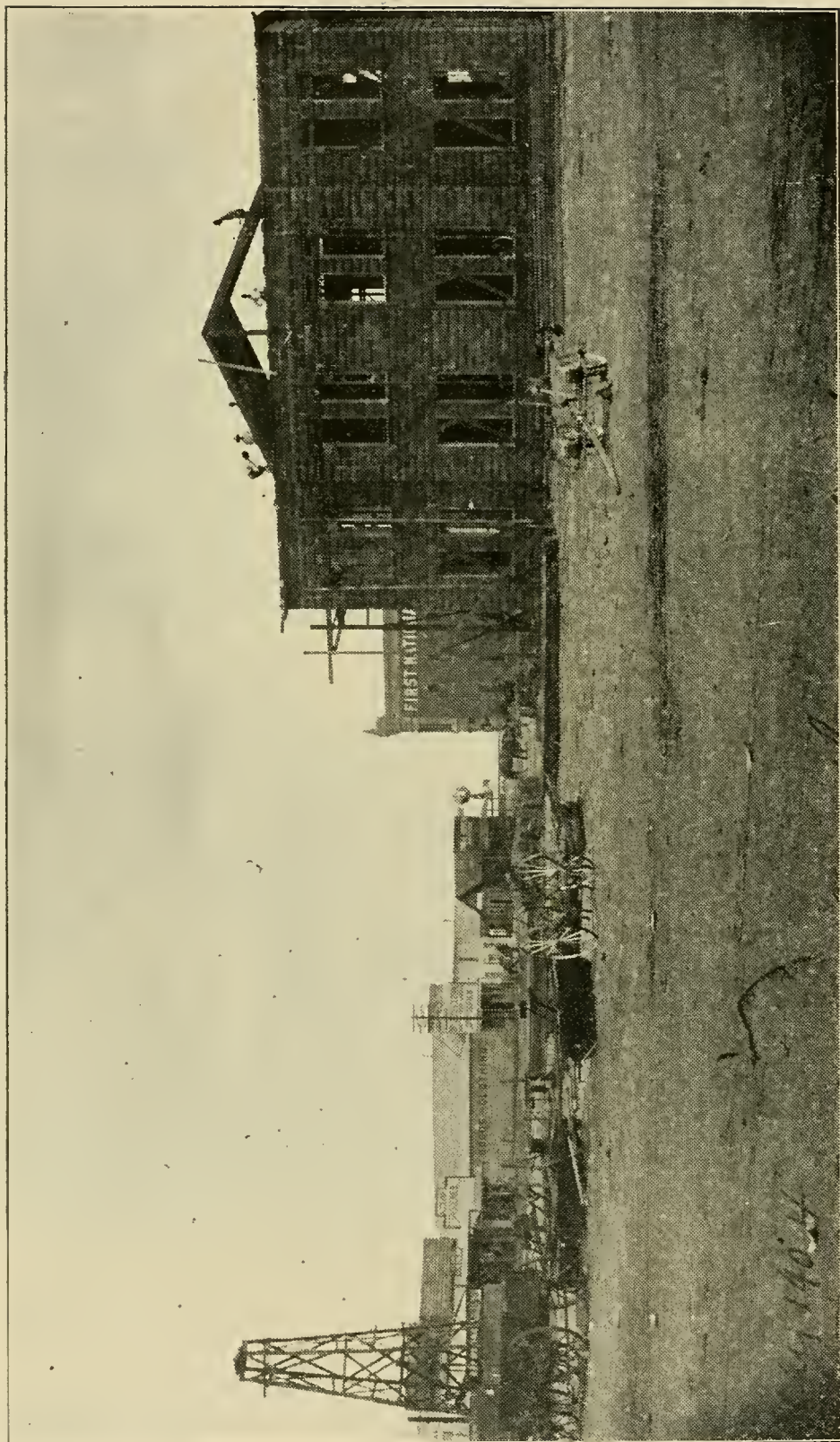


ROOSEVELT COUNTY SCENES.

It is crossed from the northeast to the southwest by the Pecos Valley and Northeastern Railway, a part of the Santa Fe system, operating seventy miles in the county. Not to exceed 250,000 acres have been appropriated or reserved, the area subject to entry under the land laws being 1,035,934 acres, while the remainder is included in public school sections 16 and 36 and other territorial lands. As late as the year 1900, with the exception of a few cattle, horse or sheep ranches, long distances apart, the whole region was unoccupied and unappropriated government land. Since the year 1900, there has been a steady inflow of settlers, so that by this time 1,560 quarter sections are occupied by actual settlers who are mostly engaged in farming without irrigation as a means of earning a livelihood. There is throughout the Inland Valley, an inexhaustible supply of water, from surface springs to an underground flow, at a depth of 100 feet. This makes a convenient supply of good water, that has been pronounced by experts to be more cheaply available for irrigation on small farms than could be otherwise obtained. The water can be raised to the surface by means of pumping engines at a comparatively low cost. This also makes possible the intense cultivation of the land. A test is now being made for artesian water in Portales and it is believed that a flow can be secured at a moderate depth. The people who have settled in the county are for the most part from the plains of Texas and Oklahoma.

The western range of townships lie in such proximity to the Pecos River Valley that a considerable body of land in that vicinity has been temporarily reserved under the provisions of the national irrigation law, pending a survey to determine the feasibility of building an irrigation system. From a view of the situation it seems evident that nature especially intended that section for a natural reservoir into which the flood waters of the Pecos can be led at a minimum cost, and from this storage reservoir by a system of canals and ditches a large tract of level, fertile land can be brought under irrigation and cultivation.

There is every indication that horticulture will become a profitable industry. Such fruit bearing trees as have reached a bearing age at the older ranches have produced fruit of an



COURT HOUSE AT PORTALES.

unsurpassed quality. The elevation retards too early blooming in the spring, while the sunshine and soil conduce to the highest development of flavor, form and color. Almost every homesteader has planted an orchard, while many thousands of forest, ornamental and shade trees have been planted. These all make a satisfactory growth, and when the soil is properly prepared before setting and afterwards kept in good state of cultivation, the growth of these is surprisingly rapid. A peach orchard at the headquarters of the "H" ranch, two miles west of Portales, bore a heavy crop of peaches in the years 1900, 1901 and 1902. All kinds of small fruit do well; also all varieties of plum and cherry trees make a gratifying growth. The climatic conditions which exist in Roosevelt county are favorable to those afflicted with pulmonary, catarrhal or asthmatic troubles, and the elevation is sufficiently great to make epidemics of enteric diseases and malaria out of the question.

Portales.

The building of the Pecos Valley and Northeastern Railway extension, connecting Roswell with Amarillo during the fall of 1898, marked the beginning of the building of the town of Portales. While the railroad was being constructed there was a tent city on the townsite, which, for the most part, vanished after the tracks were laid and the depot built. Little was done in the line of settlement and the permanent building of the town until the fall of the year 1900. The altitude of Portales is 4,004 feet above sea level. It is ninety miles from Roswell, 116 miles from Amarillo, and eighteen miles from the New Mexico-Texas boundary. It lies in a valley in which rise the headwaters of the Yellow Horse branch of the Brazos river. The general contour of the surrounding country is level prairie, and throughout the entire vicinity water may be had from springs that flow out at several points along the draw and from a depth of 100 feet or more. The growth of the town has been steady, and has not exceeded the settlement and development of the surrounding country. Its population at present is 1,300, while the precinct has a population of over 2,000. There are two banks, one national, and the other territorial. There are five hotels and a number of boarding



SCENES NEAR AND AT PORTALES.

houses, three dry goods stores, two saddlery stores and shops, four grocery stores, three drug stores, two grain and feed stores, two livery barns, four lumber yards, two meat markets, three blacksmith shops, one tin shop, two newspapers, The Portales Herald and The Portales Times, three doctors, three churches, a plant for the manufacture of artificial stone for building purposes, a cold storage plant, two millinery stores and a telephone exchange. Farming and stock raising are the industries that contribute mostly to the town's prosperity. Pure water free from alkali is obtained on the townsite from wells at a depth of eighteen feet. A stone court house was built this year.

Elida

is situated near the southwestern boundary. It is twenty-five miles from the county seat, and is a station on the Pecos Valley and Northeastern Railway. The land in its neighborhood is rolling prairie and covered with a luxuriant growth of mesquite and gramma grass. A townsite has been laid out. It covers eighty acres. A square is dedicated to the public. A public well, pumping plant and reservoir and a block for a post office building are included in this public square. Elida has a postoffice, a general merchandise store, a hardware store, a large lumber yard, a grain and feed store, a restaurant, a weekly newspaper, The Elida News, a blacksmith shop and a carpenter shop. In the town and immediate vicinity there is a population of 600 people. Beyond the present settlement and in every direction there are fine lands subject to entry under the homestead act.

Texico

is at the point where the Pecos Valley and Northeastern Railway crosses the New Mexico-Texas boundary line. The townsite was surveyed and platted in August, 1902: it is twenty-two miles from Portales. The land upon which the town is located is for the most part level. The growth of the town has been quite rapid. More than 100 quarter sections of land in the immediate vicinity have been occupied by actual settlers. The soil in the vicinity is a deep sandy loam, easy of cultivation and very productive. The survey of the



BUILDINGS AT PORTALES.

Eastern Railway of New Mexico forms a junction at this point with the Pecos Valley and Northeastern Railway, and surveys have been made out of Texico for railroad purposes eastward to Floyada and Quanah, Texas. There are already at Texico eighteen business houses and the population of the town and immediate vicinity is not less than 500. A school house has been built and a weekly newspaper, The Texico Trumpet, is published.

Bethel,

which is nine miles from Portales has a post office. A school is maintained here by the Christian church, which has erected buildings at this point for the accommodation of students. The land in the vicinity of Bethel for several miles in every direction has been entered under the homestead act, and is being occupied and cultivated by actual settlers.

Floyd.

Nine miles west of Bethel is the settlement and post office of Floyd. Floyd has a general store and a neat school building only recently completed. Practically every quarter section of land for several miles around this settlement has been taken up, and is occupied and under cultivation by homestead entrymen.

Sandoval County.

Area 3,959 square miles. Population 12,500. Assessed valuation in 1903, \$792,565. County seat, Sandoval. Post offices: Albemarle, Algodones, Bernalillo, Bland, Cabezón, Casa Salazar, Cuba, Jemez, Miller, Pena Blanca, Perea, Placitas, Sulphur, Sandoval, Señorito, Thornton, Woodbury.

The county was created by an act of the 35th Legislative Assembly in 1903, Bernalillo county contributing the largest area. Of its area, 1,230,000 acres or one-half, is still subject to entry under the federal land laws, while a considerable portion of the remainder is included in so-called private land grants. The Rio Grande cuts through its southeastern corner. The Puerco river rises in the county. Next to the Rio Grande and the Puerco, the Jemez is the principal stream. The Galisteo, the Frijole, the Una de Gato and the San Pedro are the streams in the eastern part.



SANDOVAL COUNTY FRUIT.

The main range of the Rocky mountains here called the Valles, or Cochiti and Jemez range, and the Continental Divide penetrate into the county, some of the peaks rising to an elevation of 12,000 feet. These mountains are cut by deep gulches and canons. In its southeastern part is the massive and picturesque Sandia range.

It is the thirteenth in size among the twenty-four counties of the Territory, covering an area almost four times as great as does the State of Rhode Island. The principal industries are stock raising, farming, fruit growing and mining. Its central location, great diversity of topography and fine climate, together with the fact that the central Rio Grande Valley starts in the county and extends through it for more than twenty miles, give it prominence and attractiveness. There are nearly 600,000 acres that can be brought under irrigation and about 1,500,000 acres are good pasture. The mesas or tablelands are usually long stretches of plain, varying in width from five to twenty miles and extending from the base of the mountains in the direction of the valley, with an inclination of only a few feet to the mile, and ending abruptly in a range of bluffs or sand hills, which form a background of brown to the verdure of the valley. The mesas are the principal grazing districts. In seasons of average rainfall the grass grows well.

About 10,000 acres are under ditch, only about 3,000 acres being under actual cultivation. The irrigation systems are primitive and there is abundant opportunity for profitable investment in irrigation works. The Indian villages of Cochiti, Santo Domingo, San Felipe, Sandia, Jemez, Santa Ana and Zia are in the county. Fruit, especially the Mission grape, vegetables and alfalfa, do well in the Rio Grande bottoms. The range is very good especially for sheep. The mineral resources are varied, Bland being the principal mining camp, and Hagan the center of fine coal deposits. A number of pleasant summer resorts and hot and mineral springs are situated in the Valles range. The county is traversed for about forty miles by the Santa Fe Railway.



SCENES AT AND NEAR ALBUQUERQUE.

Bernalillo

is the largest town. It was at one time the county seat of the county of Bernalillo, in which it was located formerly. It has quite an interesting history and is one of the oldest European settlements in the Rio Grande Valley. It is picturesquely situated, surrounded by fields and orchards, which are irrigated from the Rio Grande. It has a modern flour mill, several substantial business houses, an academy for girls, good public schools and nice homes. Its climate makes it a very agreeable place for healthseekers. Round about are many prosperous agricultural settlements. Several Indian pueblos lie a few miles north of it. The vineyards of the immediate vicinity are famous, the Mission grapes here attaining a size and flavor that is unexcelled. The town has a Roman Catholic church. Bernalillo is situated on the main line of the Atchison, Topeka and Santa Fe Railway. The census of 1900 gave it a population of 766, but many more people live in its immediate vicinity.

Sandoval is the county seat for the present but has no court house and jail.

Thornton is a railroad station where there are several stores and is the terminus of the wagon road to the Cochiti mining district.

At Algodones a townsite has been laid out, and after the building of the Santa Fe Central Railway from Hagan to Algodones, where it will form a junction with the Atchison, Topeka and Santa Fe Railway, it will become an important railroad point.

Corrales and Huertas are settlements in the Rio Grande Valley, and La Madera and San Antonito are rural settlements picturesquely situated in the foothills of the Sandia mountains.

Jemez

is in the western part of the county and is of importance as in its vicinity are the celebrated Jemez, Sulphurs and San Antonio hot springs, the waters of which are especially good in blood diseases, kidney complaints, rheumatism, stomach troubles and other disorders. The excellent curative properties of these waters are well known throughout New



ALBUQUERQUE STREET SCENES.

Mexico, but as Jemez is fifty miles from the railroad, the town and surrounding springs are not visited and used much by people from outside of the territory. Whenever this section shall have railroad connection the springs are sure to become a great health resort. Cuba in the western part of the county is a trading point doing a healthy business.

San Juan County.

From an agricultural and climatic standpoint, San Juan county is one of the most favored counties in New Mexico. Area 5,598 square miles. Population 6,500 (4,828 according to census of 1900). Assessed valuation in 1903, \$679,491. Post offices: Aztec, Farmington, Putnam, La Boca, Blanco, Bloomfield, Canon, Cedar Hill, Crozier, Crystal, Floravista, Fruitland, Hood, Jewett, Kirtland, La Plata, Largo, Olio and Pendleton.

San Juan county occupies the northwestern corner of the Territory. The government monument, which marks its northwestern corner, also marks the corners of New Mexico, Arizona, Utah and Colorado. It is adjacent to one of the richest mining fields in the United States and its present distributing point is Durango, just over the Colorado line. It is an empire in itself. Of its area 1,958,400 acres are included in the Navajo Indian reservation; 1,470,000 acres are still subject to entry under the land laws; about 260,000 have been appropriated, and about 300,000 acres are irrigable. It is five and one-half times as large as the State of Rhode Island; three times as large as Delaware and it contains 900 square miles more than the State of Connecticut.

Topographically the county, or at least the irrigable portion of it viewed from above, presents the appearance of a basin surrounded on all sides with mountains and high ridges, with a deep notch cut into one side, through which the San Juan river flows. It is not mountainous, but is located in the foothills, on the mesas, and in the valleys with gigantic mountain masses to the north in Colorado. Some of the hills, however, rise to a considerable altitude. Outside of the river valleys and the upper mesas, which are broad and level, the county consists of a series of double lands broken by arroyos and generally composed of fertile soil, upon which the native



RANCH SCENE IN SAN JUAN COUNTY.

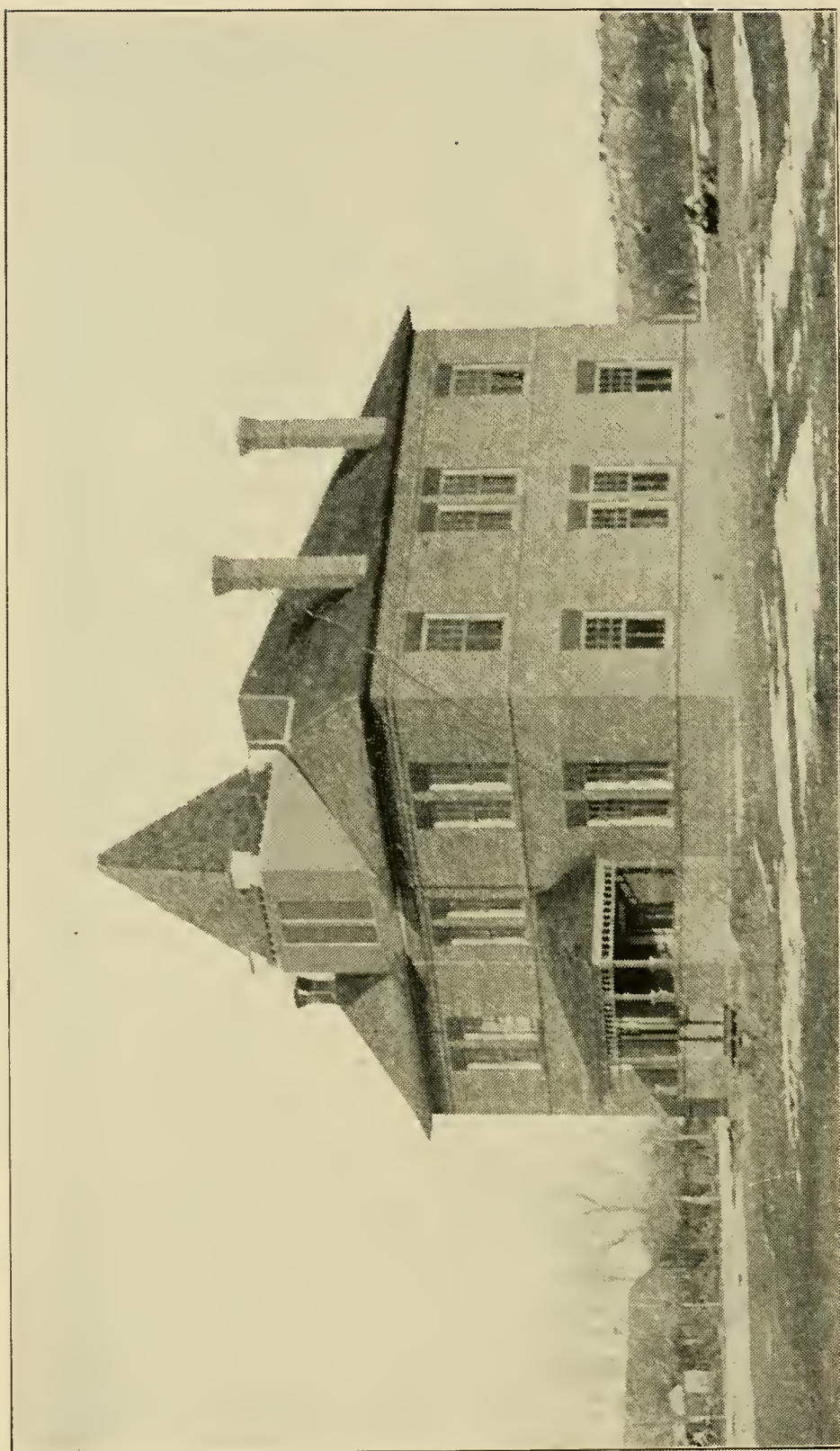
grasses grow luxuriantly. The altitude ranges from 4,500 to 5,800 feet. The annual rainfall amounts to fourteen inches. The water supply for irrigation is abundant and is distributed by splendid systems of canals and ditches, several new systems being under construction. The irrigable areas are found on the table and bottom lands of the San Juan, Las Animas and La Plata rivers. About 100,000 acres are under ditch, of which 50,000 acres might be easily cultivated, but thus far only 15,000 acres are under actual cultivation. Alfalfa, the cereals and the best of fruits are the principal crops. Its apples are famous in eastern markets. Climate and conditions are especially favorable to dairying, poultry, farming and bee culture. The live stock industry is important as by far the greater part of the area of the county is free public range. The largest coal deposits of New Mexico are there, but owing to lack of railroad facilities, they are being worked only on a small scale. There are also indications of oil.

Farmington

is the largest town, having a population of about 750. It is situated on the San Juan river, between the mouths of the Animas and the La Plata rivers. It was an Indian trading post twenty-five years ago. Every branch of trade is represented. There are three large mercantile establishments, two hotels, two restaurants, one drug store, two blacksmith shops, one millinery store, one hardware store, one confectionery store, a modern flouring mill run by water power, a distillery, an evaporator, two meat markets and a meat packing establishment, one lumber yard, one jewelry store, two barber shops, three churches, one weekly newspaper, The Farmington-Times Hustler, one bank, one livery stable and one brick yard. It is an incorporated town, has a system of public water works and an electric light plant. It has a commodious brick school building. A United States Indian school for the Navajoes is being built ten miles west of Farmington.

Aztec,

on the Animas, is the county seat. It is twenty-three years old. It has four general stores, one hotel, one restaurant, one drug store, one hardware store, a modern water power flour mill, one barber shop, one livery stable, one harness



COURT HOUSE AT AZTEC.

shop, one millinery store, one jewelry store, one confectionery store, one nursery, three churches, a weekly paper, the Index, a new \$10,000 court house and jail, a high school building, whose four rooms, however, have been outgrown by the town and another school house will be built to increase the school facilities. A banking institution has been established. The population of Aztec is 600.

Largo

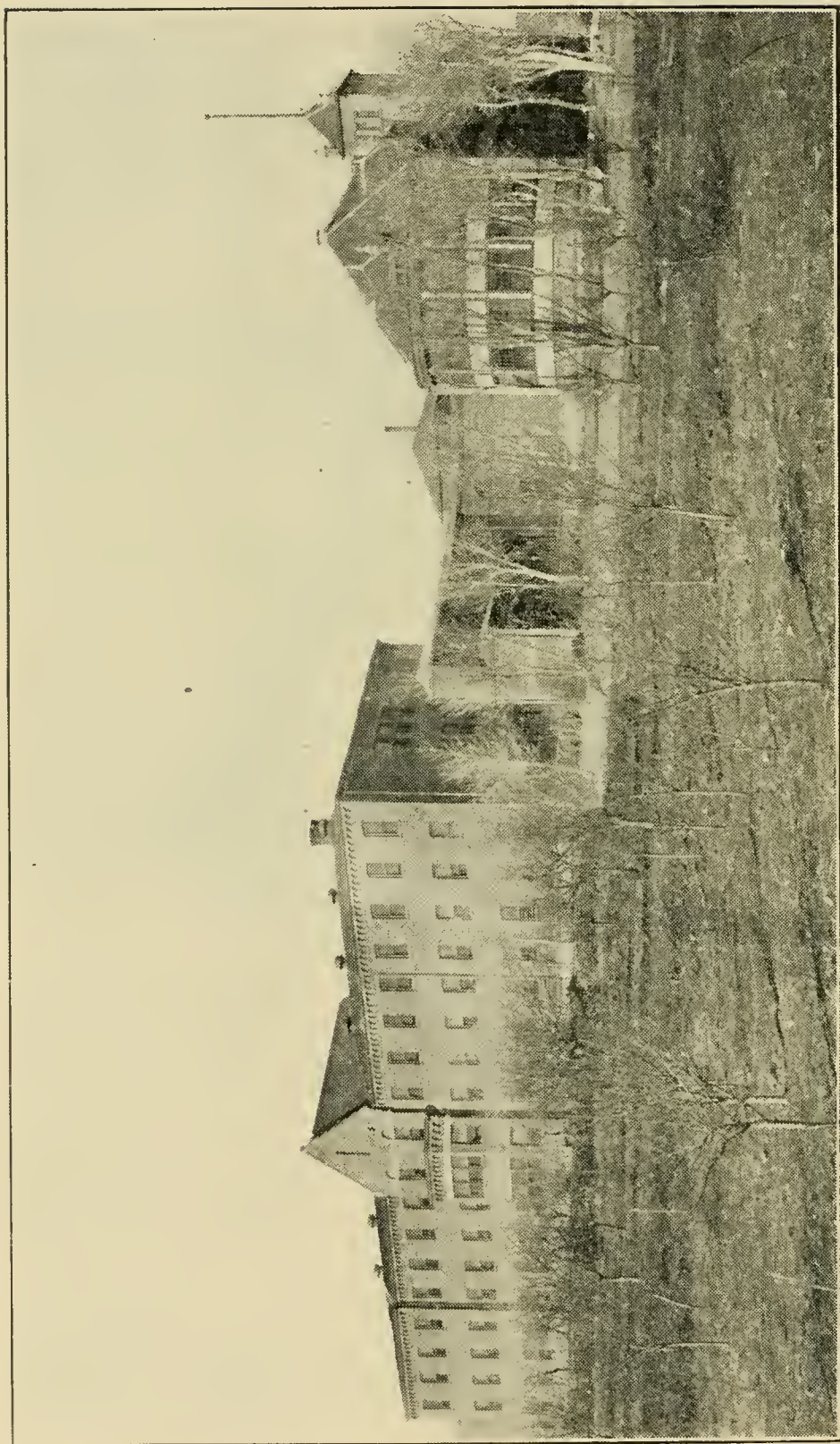
is quite a settlement on the San Juan river at the mouth of the Canon Largo. It is the oldest in the county and its inhabitants support themselves by agriculture and stock raising. Blanco is a new town on the upper San Juan river which bids fair to attain considerable prominence in the near future as it is the headquarters of an irrigation company which has the construction of a large canal and the bringing of 30,000 acres of land under irrigation in view, and is now preparing for this work.

The valleys of the San Juan river and its two principal tributaries in the county, the Animas and the La Plata are thickly settled by enterprising and hardworking farmers who support themselves by agriculture, horticulture and stock raising. The orchards of that section are many and San Juan county fruit has already attained a very enviable reputation.

San Miguel County.

Area 5,001 square miles. Population census of 1900, 22,053, present population, 25,500. Assessed valuation in 1903, \$4,450,000. County seat, Las Vegas. Post offices: Las Vegas, Tecolote, Villanueva, Willis, Mineral Hill, Sibley, Onava, Sanchez, Trementina, Bell Ranch, Beulah, Cabra, Chaves, Chaperito, Corazon, Chapelle, Hadley, Gallinas Springs, Los Alamos, Rociada, Sapello, Fulton, Pecos, Ribera, Rowe, San Jose, San Miguel, Sena and Gonzales.

San Miguel, the "Empire County" of New Mexico, is not only one of the most favored sections of the Territory in point of early settlement and subsequent development, but it presents such diversity of resources that homeseekers and investors are alike attracted to the region. The leading industry is stock raising, although the county is also a

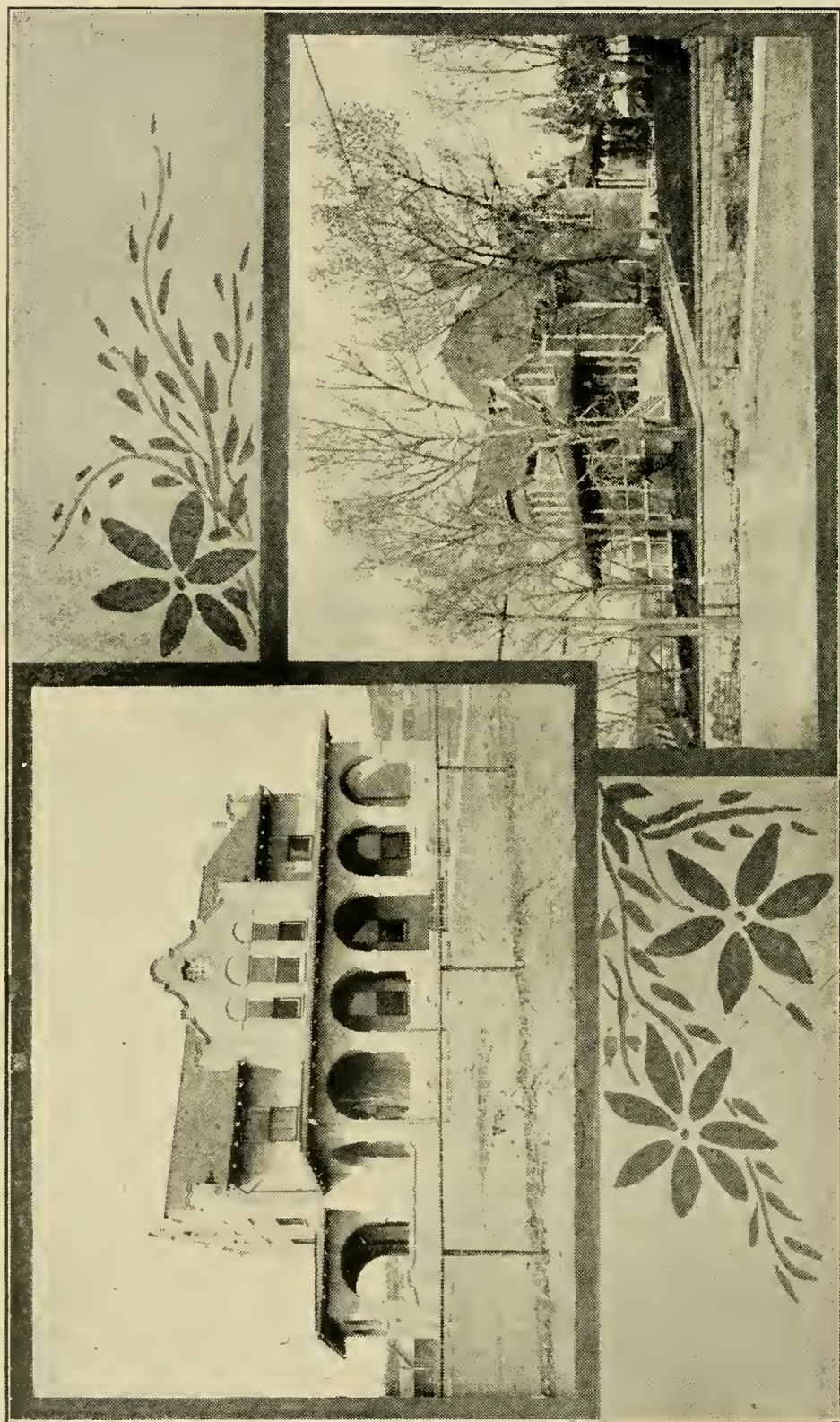


NEW MEXICO INSANE ASYLUM AT LAS VEGAS.

producer of cereals. The small stock owners rather than the large concerns, control the range. The mild winter climate, a fair supply of water and good shipping facilities, are advantages that the stock raiser appreciates. There are about 70,000 head of cattle and 400,000 sheep owned. Crop raising without irrigation is feasible in a few of the mountain valleys. Wherever water is available for irrigation prolific crops of grain, vegetables and fruit are raised. San Miguel produces excellent building stone and its mineral wealth comprises deposits of gold, silver, lead, copper, mica, iron, alum, gypsum, fire clays and especially coal. The lumber industry is important and the northwestern part is timbered, part of the Pecos Forest Reserve being in the county. The Santa Fe Railway cuts through the county and is one of the principal factors in its prosperity. The Dawson Railway traverses the eastern portion. The climate is very good and a number of health and pleasure resorts are located near Las Vegas.

Las Vegas

means "The Meadows." It is a city of over 10,000 inhabitants, situated on both sides of the Gallinas river and is the county seat. It lies in a pretty and fertile valley at the western edge of a wide plateau of tableland, stretching many miles eastward and at the foot of the main range of the Rocky mountains, occupying a commanding site in a commercial as well as climatic respect. Its history commences definitely with the year 1835 when a colony was established there by the Republic of Mexico. A grant of land comprising nearly 500,000 acres in extent was given to the community of Las Vegas for homestead and agricultural purposes, and through colonization the population gradually increased and the town or community of Las Vegas was permanently established. Las Vegas of today which is a modern city, is composed, strictly speaking, of the incorporated city of Las Vegas and the town, also incorporated, lying west of the river. While portions of the old town have a quaint and picturesque appearance, adobe houses, narrow, crooked streets, old customs, handicrafts and occupations, always of interest both to local residents and tourists, yet it, as well as the new town east of

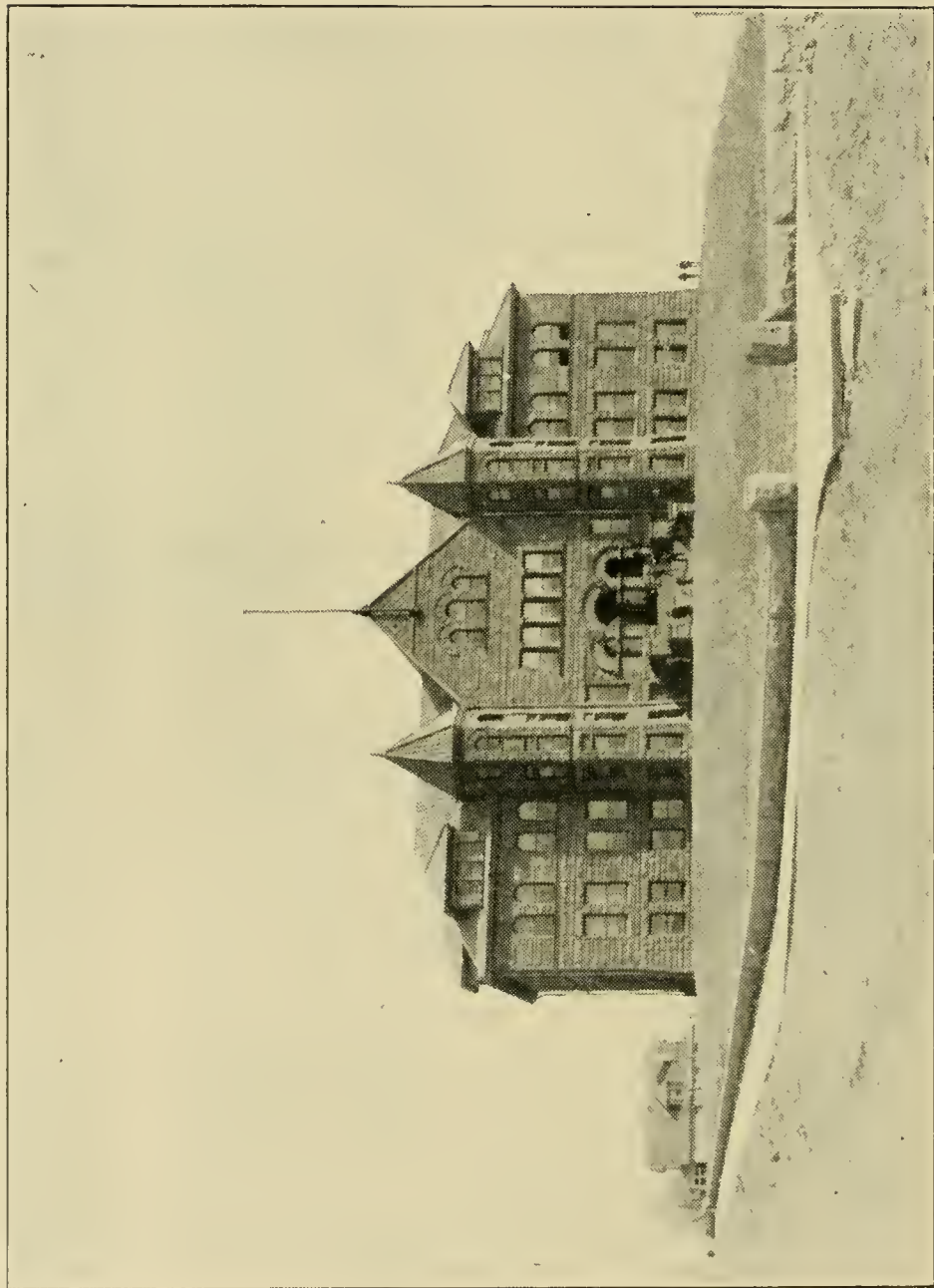


RESIDENCES AT LAS VEGAS.

the river, constitute distinctive modern cities. The streets are wide and well graded, while cement sidewalks line almost every street and many are lined with growing trees. Three parks, with lawns and trees, add to the beauty of the place, as do handsome and well filled stores, elegant residences with attractive environments and nice lawns. Its thermal waters are of great healing quality, while its climate is very superior, there being no malaria, no excessive heat nor cold and there is freedom from mosquitoes. The air is pure, dry, rarified and highly electrified, a certain cure for consumption, if the cure be taken in time. The mineral waters of the hot springs nearby are a specific for liver, skin, rheumatic and blood disorders. For the year 1903 the mean annual temperature was 51.7 degrees. There were 286 clear days, sixty-four partly cloudy days, and only fifteen clouded days. On fifty-three days more than 0.01 of an inch of precipitation fell with a total rainfall of 9.78 inches, and 15.5 inches of snowfall, the normal annual precipitation being 19.35 inches.

The water supply is good and is taken from the Gallinas river, in the canon, about seven miles above the town. The latitude of Las Vegas is about the same as that of central Tennessee, while the altitude is nearly 6,500 feet. This combination gives a peculiar and beneficial result. In the winter the thermometer seldom falls below forty degrees in the sun, while it often runs up to sixty-five degrees or even more. On the other hand, in the summer, the heat is never oppressive in the shade and no night is too warm for comfortable sleep under one or two blankets. This, with the extreme dryness of the air, caused by the slight precipitation of moisture, the resinous aroma coming from the pine clad mountains, the large amount of electricity in the air, and the ozone resulting from the altitude, as well as its location, land locked by mountain and mesa, combine to produce an atmosphere which is a balm to the respiratory organs affected with disease.

In the way of health and pleasure resorts, Las Vegas does well. In a radius of twenty miles, in romantic mountain glens, are located many picturesque health resorts. Among them are Las Vegas Hot Springs, Harvey's Resort, the highest mountain resort in the world; El Porvenir, Sandoval's,

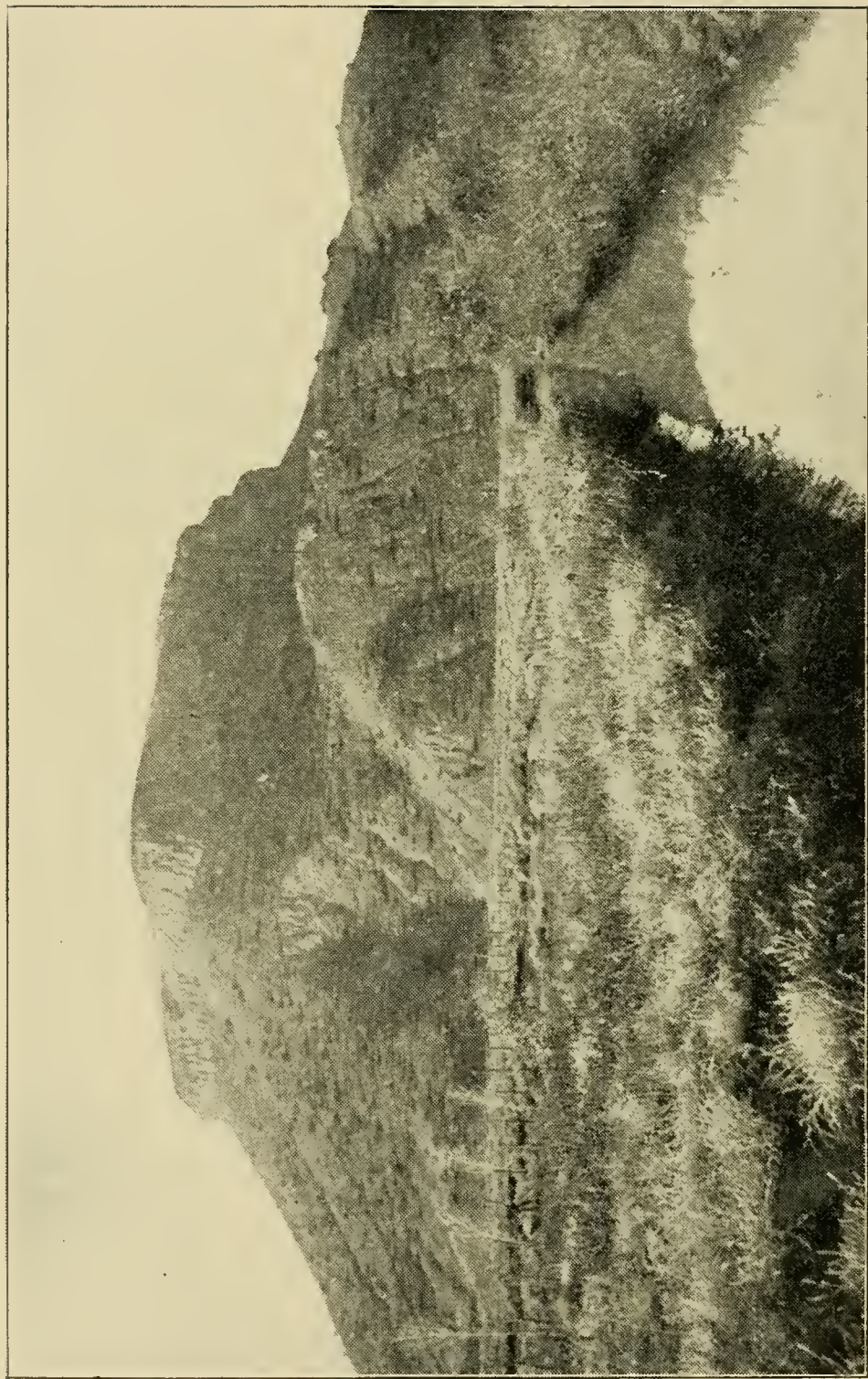


NEW MEXICO NORMAL UNIVERSITY AT LAS VEGAS.

Mineral Hill, Romero Ranch, Blakes, Sparks, Sapello and Rociada. There one can enjoy all outdoor sports, such as trout fishing, hunting, etc. The lover of nature has here the opportunity of viewing some of the grandest mountain scenery in all the Rocky mountain region, the "Scenic Route" road being under construction at present across the Pecos Forest Reserve to Santa Fe.

Las Vegas affords satisfactory educational advantages, having five public schools, one being a handsome stone structure costing \$25,000, and the Territorial Normal School, which has an advanced course of study. These schools employ upward of twenty-one teachers, with an enrollment of 2,200 children and students. Among other schools are the Academy of the Immaculate Conception, conducted by the Sisters of Loretto; a Presbyterian mission, a Methodist Training Manual and a commercial school in connection with the Normal University, as well as several music schools. There is now being erected a Carnegie Library to cost not less than \$10,000.

Las Vegas is the headquarters of the New Mexico division of the Santa Fe Railway system, and has railroad machine shops, tie preserving works and stock yards. It has two national banks and one savings bank with deposits of nearly a million, three local building and loan associations, a trust company, over a dozen new and commodious hotels, restaurants and boarding houses; commission and wholesale firms carrying large stocks of merchandise. It is a noted wool center, and the annual sales of that staple reach into the millions. Here is located the largest sheep dipping plant in the country and five wool scouring mills are operated. There are published at Las Vegas the Optic, an eight page daily newspaper, having the Associated Press service; several weekly publications, including the Weekly Optic and Stock Grower, La Voz del Pueblo, El Independiente and La Revista Catolica. There are twelve churches of various denominations. Las Vegas has about eight miles of electric railway, two electric light plants and a roller flour mill, with a capacity of fifty barrels per day, as well as ordinary flour mills; a manufactory of mineral and carbonated waters; three or more carriage and wagon manufactories; saddle and harness factories; two planing mills, as well as two



INDIAN IRRIGATION DITCH NEAR SAN ILDEFONSO, SANTA FE COUNTY.

lumber yards; one foundry, one machine shop; two ice plants and a cold storage plant. The town has two telephone exchanges; one that connects this city with Denver and other Colorado points. A large and well equipped sanitarium known as St. Anthony's is conducted by the Sisters of Charity. There are also quarries of building stone near the city. The city has a driving park and the Montezuma hotel and sanitarium at the Hot Springs is about to be reopened. The Territorial Insane Asylum having accommodations for 200 patients is located here. It is an extensive institution and its capacity and buildings are being increased. An addition to cost \$30,000 is now in course of construction.

Santa Fe County.

Area 2,160 square miles. Population, census of 1900, 14,658; present population is 18,000. Assessed valuation in 1903, \$2,458,790. County seat, Santa Fe. Post offices: Santa Fe, Glorieta, Cerrillos, Golden, Kennedy, Madrid, Moriarty, San Pedro, Chimayo, Hobart, Ildefonso, Nambe, Pojoaque, Santa Cruz, Lamy, Cow Springs and Galisteo.

This county does not occupy as conspicuously large an area as many other counties of New Mexico, but owing to the history of its political capital, whence it derives its name, its scenic and climatic attractions and its diversified resources, it naturally takes first rank in interest among the political subdivisions of the Territory.

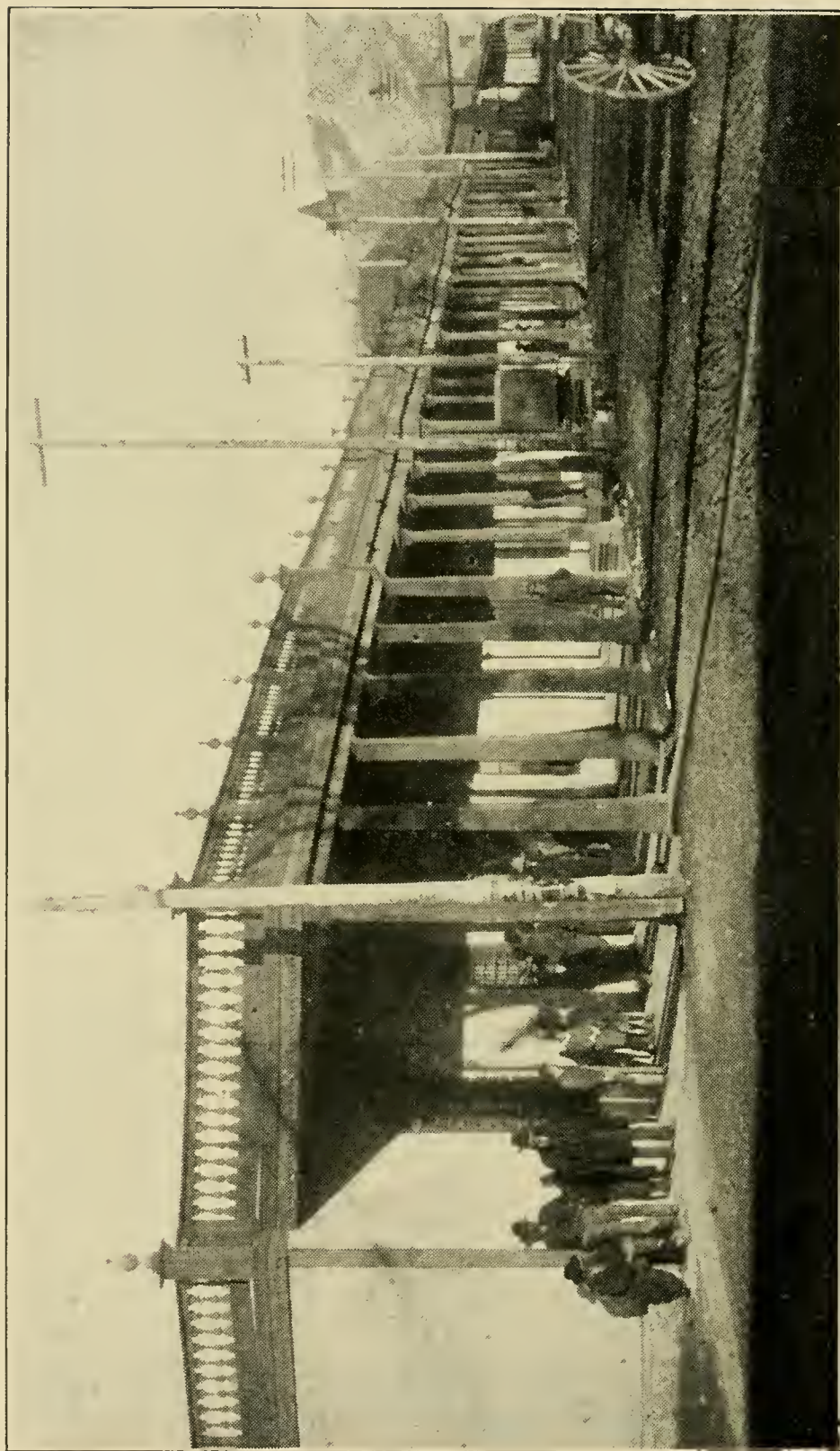
It is the central county of the Territory; is rectangular in form, extending south a distance of seventy-two miles from the thirty-sixth degree of latitude, and measures thirty miles from east to west; embraces a total area of 2,160 square miles, being twice as large as Rhode Island and 200 square miles larger than the State of Delaware. Of this area 950,000 acres are officially pronounced available for cultivation and pasturage, while thousands of the roughest mountain acres are clothed with timber and ribbed with valuable mineral bearing veins. It is crossed from east to west by the great trans-continental railroad of the Atchison, Topeka and Santa Fe system which operates over seventy miles of road within its borders, and is tapped from the north by the New Mexico division of the Denver and Rio Grande Railroad, which



NATIONAL CEMETERY AT SANTA FE.

extends within the county from Espanola to Santa Fe, a distance of thirty miles. The Santa Fe Central Railway has its terminal at Santa Fe, giving the capital direct connection with the Chicago, Rock Island and Pacific system. The length of its main line in the county is fifty-five miles. A branch line of the Santa Fe system runs from Lamy to Santa Fe, a distance of eighteen miles. A short branch of the main line also extends to the Madrid coal fields. Wagon roads reach all the towns of the county, and a telephone is in operation from Santa Fe to Cerrillos. From the summit of Mount Baldy the surface presents a magnificent panorama of mountains, mesas and valleys, with many streams of water running down high mountain slopes, over precipices and boulders, into deep and narrow gorges and widening valleys, flashing in the sunlight like ribbons of silver in their hurried and heedless race to the Rio Grande on the west, and with lofty mountain peaks of southern and northern New Mexico swimming in the blue air of the dreamy distance. The main range of the Rockies, or the Sangre de Cristo range on the east and the Cochiti and Jemez mountains beyond the Rio Grande on the west, shelter this favored locality from violent winds and render the climate remarkably mild and equable, considering that the altitude of the valley varies from 5,500 to 7,500 feet above sea level. Doubtless this circumstance together with the fertility of the soil, excellence of the water, plentitude of timber and the many marked manifestations of deposits of gold and silver bearing mineral a few miles south, prompted the intrepid Spanish explorers to locate a permanent colony and mission at Santa Fe, or the City of the Holy Faith of St. Francis, as early as 1603.

The wisdom for the selection has been well demonstrated during nearly four centuries that have since melted into the past. With the exception of the twelve years following the bloody and transiently successful revolt of the Pueblo Indians in 1680, Santa Fe has ever since been recognized as one of the most important outposts of civilization and commerce in the southwestern country, being continuously the political, ecclesiastical and military capital of this region under both Spanish and Mexican rule, and though it has since seen the frontier line of the United States carried thousands of miles

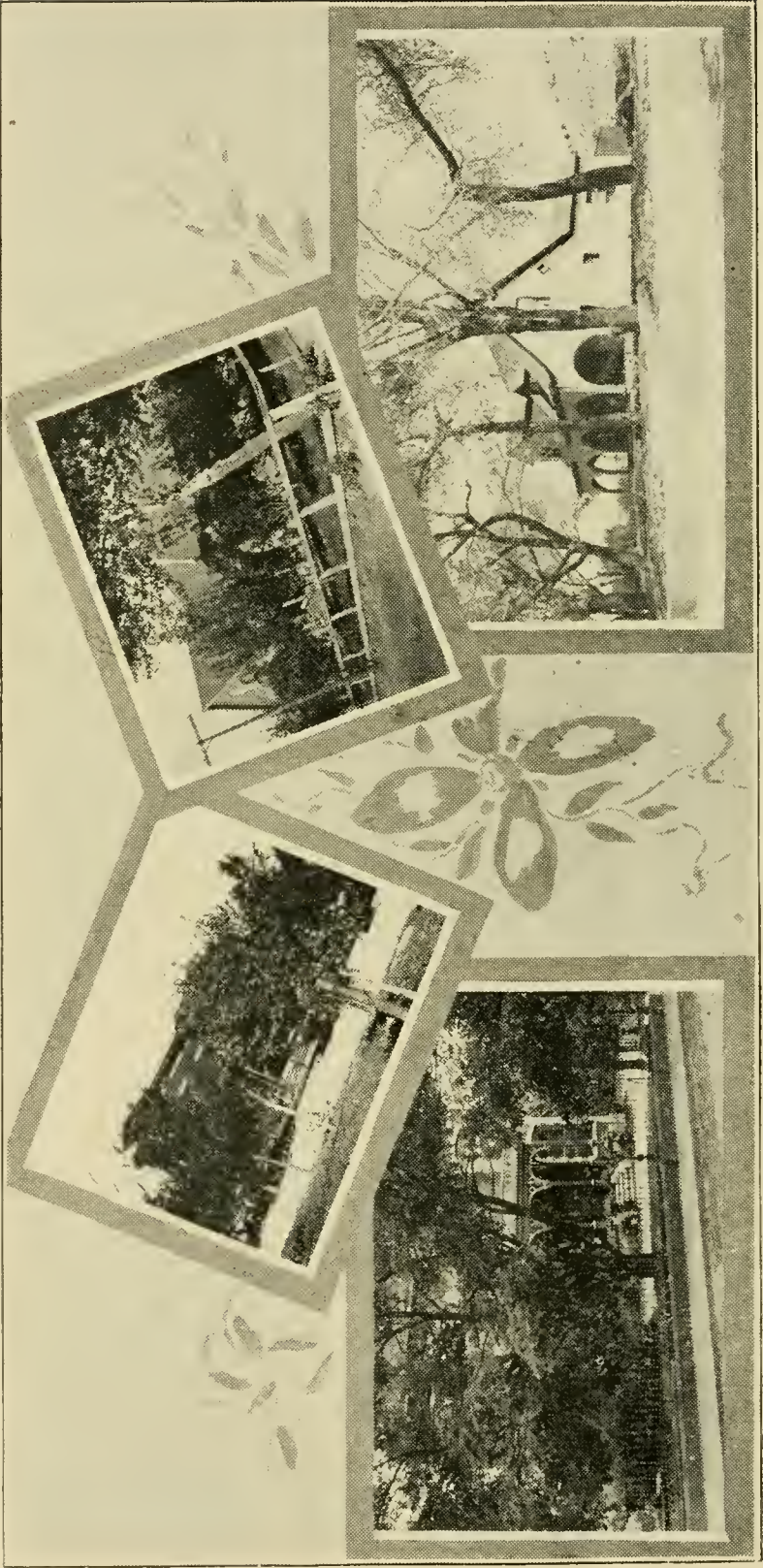


THE GOVERNOR'S PALACE AT SANTA FE.

out into the Pacific Ocean, it still maintains its supremacy as the Capital City of New Mexico, the county seat of Santa Fe county, and the most delightful residence city in the Rocky mountains.

There are about 500,000 acres of public land subject to entry under the homestead and desert land laws and 557,000 acres more are included in Spanish and Mexican grants. It may be added further that the county affords about 470,000 acres of good grazing land partly covered with timber and about 500,000 acres are arable land, 200,000 acres of which could be irrigated. In the absence of exact data, the land actually under cultivation by means of irrigation is conservatively estimated at 10,000 acres, while 5,000 acres more are yearly planted to crops subject to chances of enough rain in the growing season to mature them. Wherever the valley and mesa lands have been brought under the magic influence of systematic irrigation the results have uniformly proved most satisfactory and naturally this stimulates enterprise annually to enlarge and extend existing irrigation systems and thus gradually increase the number of acres that can be depended upon to yield regular crops. In addition to the Rio Grande, never dry within Santa Fe county and carrying a large volume of water, the Santa Cruz, the Nambe, the Pojoaque, the Santa Fe and the Santa Clara are the principal perennial streams, only part of whose waters are utilized for irrigation. There is a good range, not overstocked. The agricultural valleys produce deciduous fruits that are pronounced the finest that can be raised; alfalfa, cereals and vegetables. The mineral resources which include gold, silver, copper, lead, zinc and turquoise, made the county famous two centuries ago. The coal deposits are among the best in the southwest, the only anthracite coal bed in New Mexico being located here. Clay, lime, marble and sandstone of excellent quality are produced. The climate is the best all around climate in the world. Owing to the historic interest, the cliff dwellings, the beauty of the scenery, its easy accessibility, its trout streams and its varied industries, Santa Fe county attracts many tourists and healthseekers.

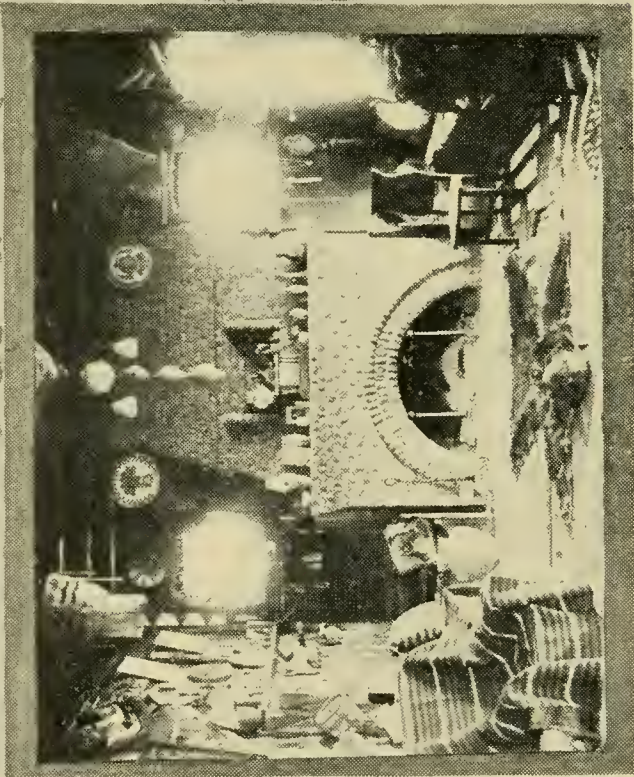
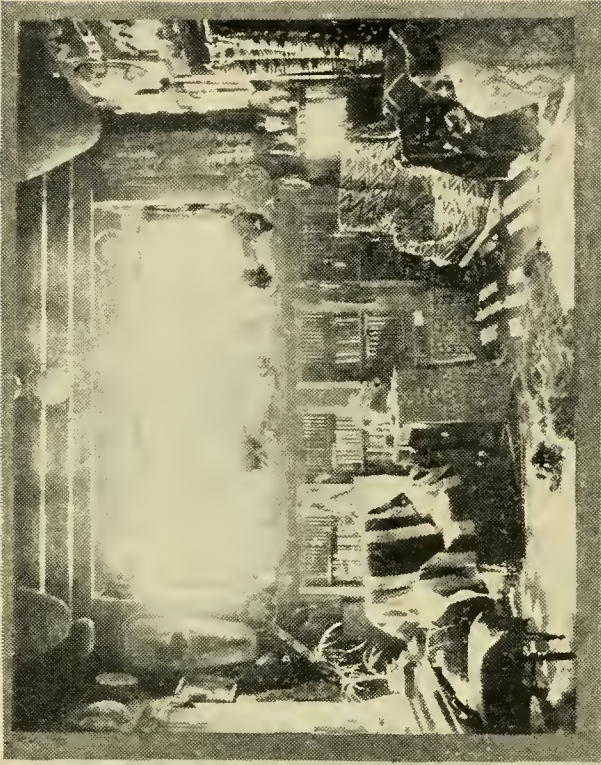
It contains a number of prosperous towns and settlements in addition to the territorial capital. Cerrillos is a mining



SANTA FE RESIDENCES.

camp which has a good public school and has a smelter, being the center of a rich mining country and near the extensive coal beds owned by the Colorado Fuel and Iron Company at Madrid. Superior building stone is quarried near Cerrillos. In southern Santa Fe county is San Pedro, which when the last census was taken, had 451 people. Here a fine copper smelter has been erected to treat the ores of the extensive workings of the Santa Fe Gold and Copper Company. Near San Pedro is Golden, a prosperous mining camp of 323 persons. Galisteo is an old agricultural settlement in the center of a sheep and cattle district. Many nice ranches are in the vicinity. The precinct is credited with 736 people. Glorieta is the starting point for most of the travel and traffic for the upper Pecos river and the Pecos Forest Reserve, and near it are iron and copper ore deposits and coal veins and the interesting ruins of the abandoned Pecos pueblo. Moriarty is the most southern settlement of the county and is at the junction of the Santa Fe Central and the proposed Albuquerque Eastern Railway.

Northern Santa Fe county has a number of prosperous agricultural communities. These are Pojoaque, with 798 inhabitants; Santa Cruz, which has 674; Tesuque, 348 people, the settlement being across the divide, six miles from Santa Fe; San Ildefonso, 392 people, near which the government has completed an irrigation canal for the San Ildefonso Pueblo Indians. Chimayo, in the extreme northern part is credited with 319 people and Canoncito or Lamy, seventeen miles southeast of Santa Fe, with 323 people. Lamy is a railroad junction point. A quarry of building and limestone is located near the place. Extensive beds of plaster paris are found a few miles north of this point. While those settlements are not incorporated, yet they all have public schools and are the centers of fertile agricultural, stock or mining districts. There are Indian pueblos all very interesting for their primitive and quaint characteristics. The largest is Santa Clara, with 223 people; San Ildefonso, 137 inhabitants; Nambe, 81; Tesuque, 80, and Pojoaque 12. Along the Santa Fe Central Railway a number of settlements have been located or townsites laid out. They are Kennedy, at the crossing of the Santa Fe Railway; Clark and Stanley near the O'Mara coal fields, Donaciano, on



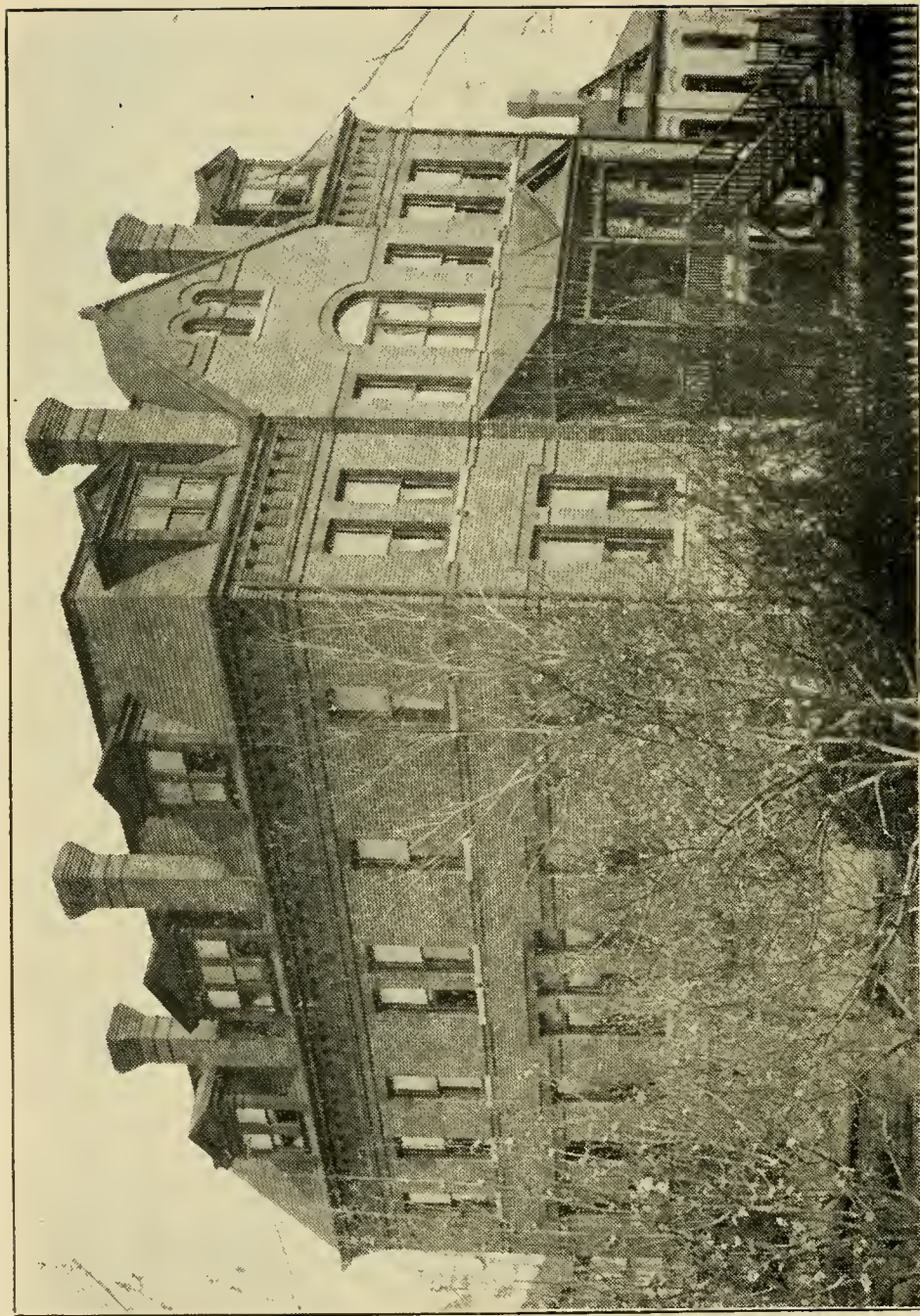
INTERIOR OF SANTA FE RESIDENCE.

the Arroyo Hondo, Vega Blanca and Moriarty. At each of these points station buildings and store houses have been erected.

Santa Fe,

The historic seat of the government of the Territory of New Mexico, as well as the county seat of Santa Fe county, and the see of an archbishop of the Roman Catholic church, enjoys the distinction of being one of the oldest towns and is the oldest capital in the United States. Its permanent settlement by Europeans antedates the founding of Jamestown and also the landing of the Pilgrim Fathers at Plymouth more than twenty years. The thrilling and romantic incidents composing its history; the protracted and bloody struggles with hordes of savage Indians; the capture and pillage by hostile Pueblos in 1680; the general massacre of missionaries and explorers and flight of the governor and a few followers in the night to El Paso; the reserving of some of the handsomest Spanish maidens for wives of favored warriors; the desecration and destruction of some of the Roman Catholic churches and the restoration of the worship of stone idols; the reconquest by Diego de Vargas twelve years later; the terrible punishment visited upon the rebellious pueblos; the change from Spanish rule to the rule of the triumphant Republic of Mexico; the capture by the United States forces under General Kearny and the building of Fort Marcy; the stirring scenes accompanying the distribution of the immense traffic of the Santa Fe Trail; the wild deeds of desperados and the fabulous hazards at cards in the days before the advent of the railroad, afford the material for an epic poem of deep interest.

Here so carefully preserved that the marks of its 300 years of age are not perceptible, is located the noted "Adobe Palace," which was the official residence of the Spanish and Mexican governors and since the Mexican war, has been the headquarters of all the territorial governors or secretaries appointed by the different presidents of the United States. Here is situated the oldest house standing on American soil, and near is the San Miguel church, first built in 1540 and still used as a place of worship. Here are the beautiful and



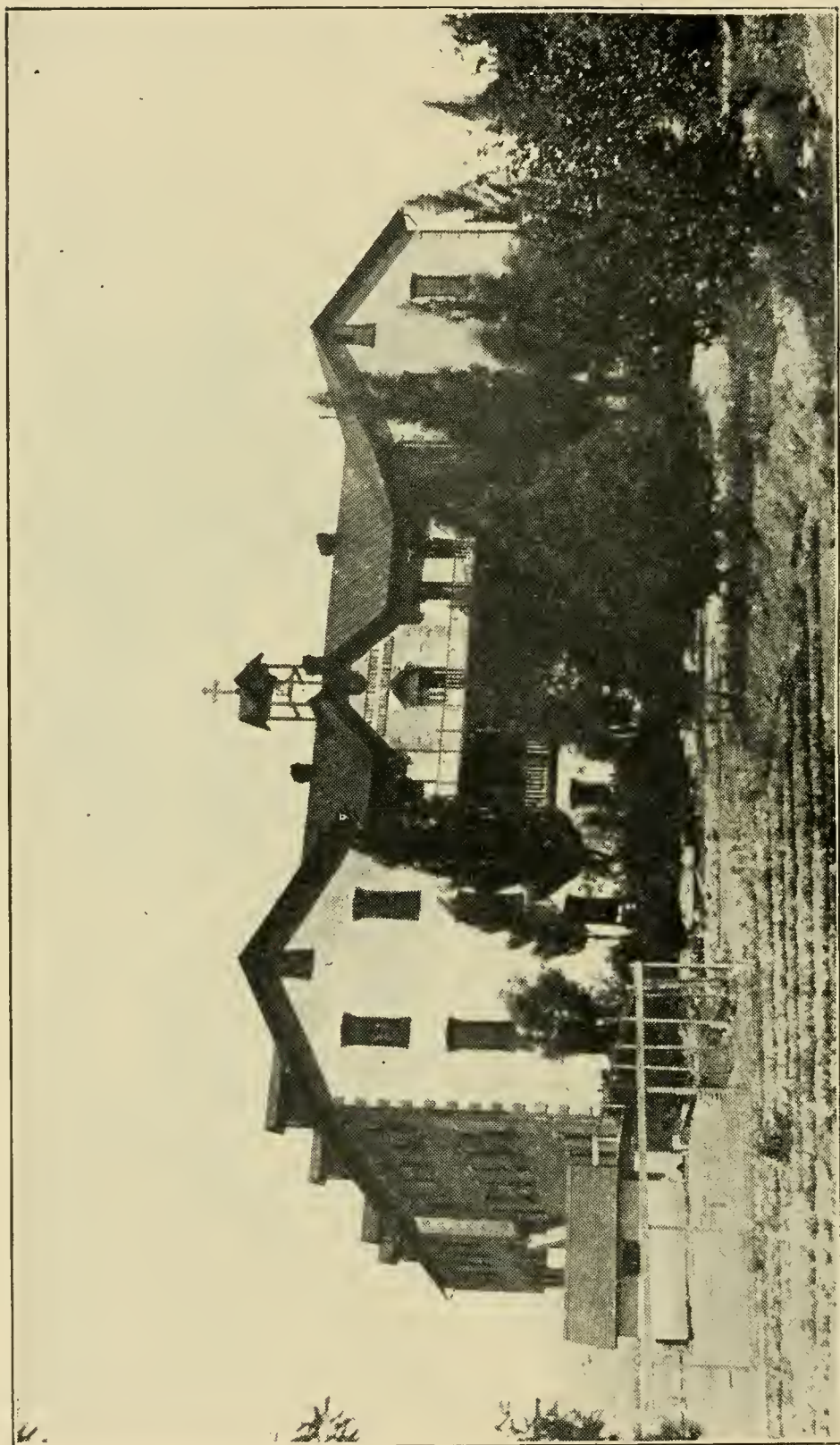
PRESBYTERIAN MISSION SCHOOL AT SANTA FE.

imposing new capitol building, the massive modern Cathedral of St. Francis, the large and enduring stone federal building, the modern penitentiary of New Mexico, San Miguel college, the Garita, the oldest cemetery in the southwest, old Fort Marcy, Guadalupe church, Rosario chapel, Loretto convent, St. Katherine's and the United States Indian Industrial schools, the New Mexico Industrial school for the deaf and dumb; Catholic, Presbyterian, Episcopal and Methodist churches; the large Presbyterian Mission school, St. Vincent's Orphan school, besides many fine business blocks and pretty residences. Here, also side by side, are object lessons whereby the civilization of the seventeenth and eighteenth centuries can be studied in contrast with that of the present day as nowhere else in America.

Environed by protecting hills and thus exempt from strong winds and sand storms; surrounded by enchanting natural scenery; beautified by orchards and gardens of flowers; blessed with a climate that is free from extremes of heat and cold, and air that is pure and tonic; supplied with an abundance of pure water for domestic, manufacturing and irrigation purposes from the extensive storage reservoirs in the mouth of the Santa Fe canon; furnished with competing rail, express and telegraph communication with all outside points; the headquarters of the federal and territorial officials, the meeting place of the legislature, the supreme court, the United States and territorial district courts and the various territorial boards; the see of the archbishop of Santa Fe; the location of the headquarters of the New Mexico Historical society; a city having started a modern sewerage system; preparing to build a fine modern central school house up to the highest standard of excellence and possessing a public school system with a good high school and four ward schools, and endowed by the national government for public school purposes with the Fort Marcy reservation of almost twenty acres in the heart of the city, Santa Fe is naturally forging to the front as a popular residence town.

It has besides the Cathedral, three Roman Catholic churches, a Protestant Episcopal church, an English and a Spanish Presbyterian and Methodist church.

The United States maintains a Weather Bureau here. The



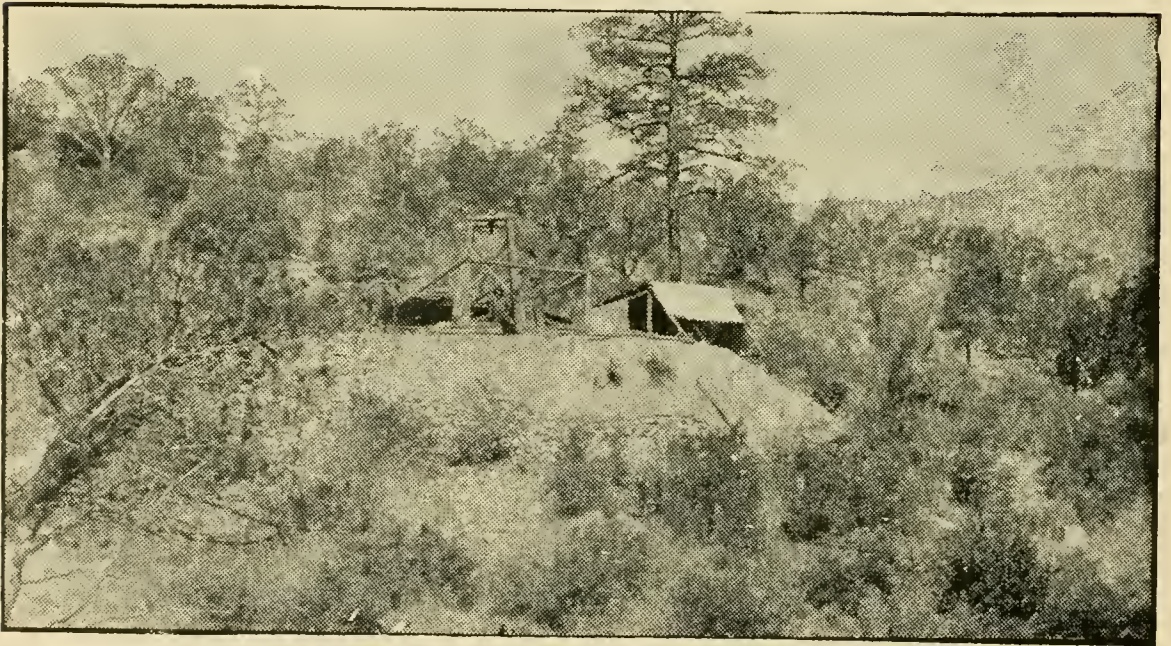
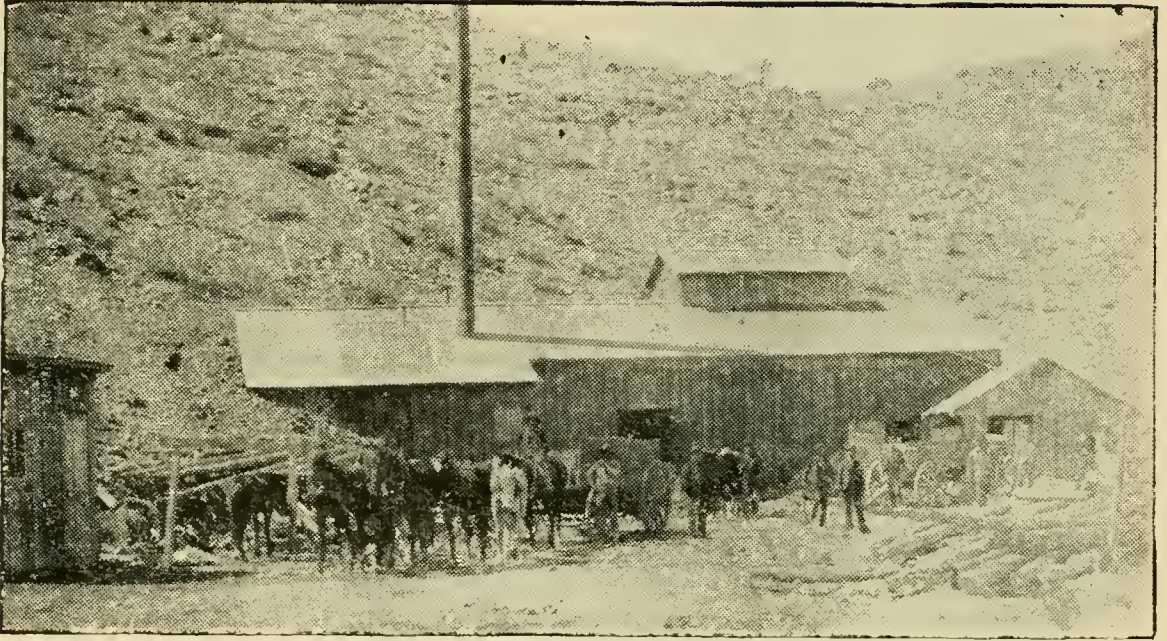
ST. CATHERINE'S INDIAN SCHOOL AT SANTA FE.

two reservoirs of the Santa Fe Water and Light Company located above the city on the Rio Santa Fe cost about \$300,000, and consist of a large reservoir or artificial lake secured by means of a semi-circular dam across the canon 600 feet long, 350 feet wide, securely tied to the bed rock and 120 feet high, with mains and service pipes extending to every part of the city; and a smaller reservoir on the hill side which, with a new ditch line from the canon, supplies the power required to operate the city's electric light plant, which is supplemented by steam. There is here the oldest bank in New Mexico. Its business houses command a large trade area and it is a gateway through which passes a big share of the wool and other products of Rio Arriba, Taos, San Juan and Santa Fe counties, as well as of southern Colorado, bound for the south or for the east.

The Woman's Board of Trade is a unique and characteristic institution. The public plaza and library are entirely under its direction. There are fine hotel accommodations; besides a sanitarium conducted by the good Sisters of Charity, and a tent city which offers comfortable homes to health-seekers and tourists.

Draw a circle of fifty miles radius with Santa Fe as the center. It will take in the heart of New Mexico. Within it will be found a score of producing mining districts. Not only gold, but copper, silver, lead, zinc, iron, coal, turquoise, quarries of marble, building stone, limestone, beds of clay, deposits of gypsum and veins of mica.

In that circle are found some of the best agricultural lands in the southwest. Here are raised some of the best fruits, the best sugar beets, the best grains in the world, and it includes the Espanola, the Tesuque, the Chama, the Taos and other valleys. Within that circle there is room and chance for profitable irrigation enterprises. In that circle flow the waters of the Rio Grande, the Nambe, the Rio Pueblo, the Truchas, the Pojoaque, the Pecos, the Santa Clara, the Santa Cruz, the Chama and other streams, all perennial rivers with a never failing water supply in their upper courses. In that circle are found the water power, the fuel, the raw material for a hundred great industries. The circle is the most densely populated area in New Mexico or Arizona, and offers cheap



SIERRA COUNTY MINING SCENES.

and plentiful labor for industrial enterprises and at the same time a good market. In that circle are superior sheep, cattle and goat ranges and forests.

New Mexico has the finest climate in the world and in that circle is the best climate in New Mexico. Within it is the great Pecos River Forest Reserve, which insures a supply of water, a summer retreat for tourists, healthseekers, pleasure seekers, sportsmen and to the tired person who seeks quiet and rest in communion with nature in its most sublime and gentlest moods. Here are located the famous cliff dwellings, the pyramids of America, ten Indian pueblos, the oldest buildings in the United States, a hundred spots which awaken memories of the romance of the great stretch of time between the coming of the Conquistadores and the supplanting of the Santa Fe Trail by railroads.

It is a circle invaded by three railroads and their important branches and connections, a circle near whose circumference are located the cities of Albuquerque and Las Vegas, which, with Santa Fe, form the three largest and most important towns in the future "Sunshine State." In the center of the circle lies the city, whose name is one to conjure with, a name given to one of the great transcontinental railway systems, a town whose very name is an invitation to the healthseeker, to the tourist, the capital of the coming Sunshine State, a county seat, an archbishop's see, the location of many federal, territorial, Catholic, Protestant church institutions, a town most charmingly situated, with a peerless climate all the year around, and a better summer climate than is possessed by any summer resort in the world, free from native consumption, malaria, enteric epidemics, mosquitoes, excessive summer heat. These and many more are the advantages, resources and attractions, the hub of which is the City of Santa Fe.

Sierra County.

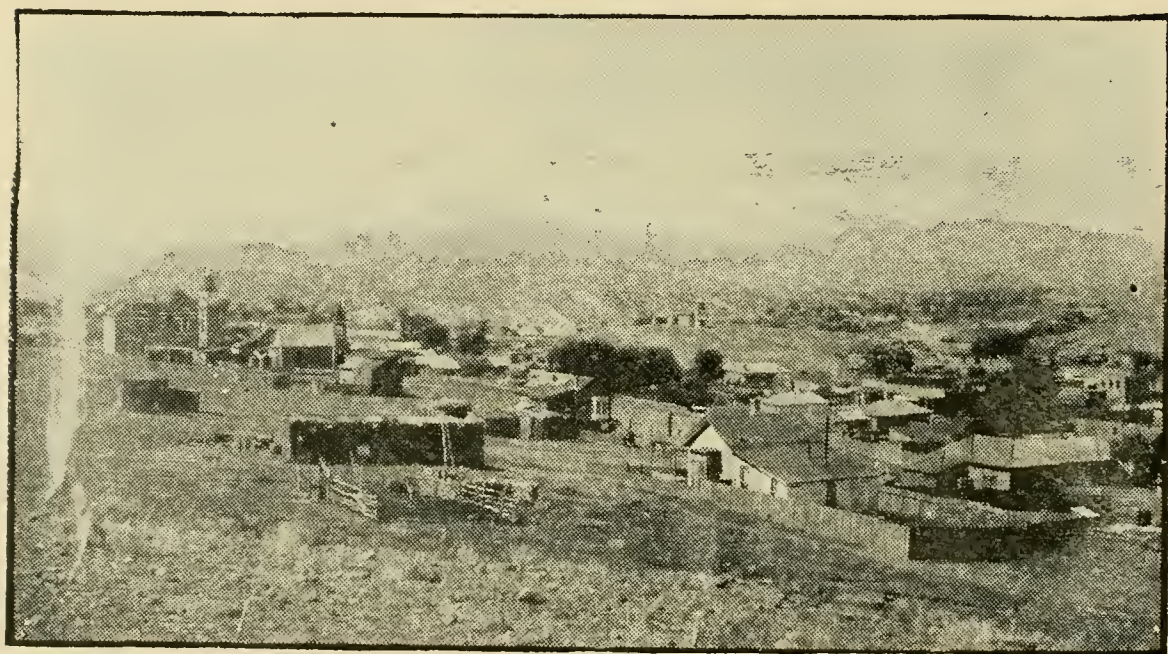
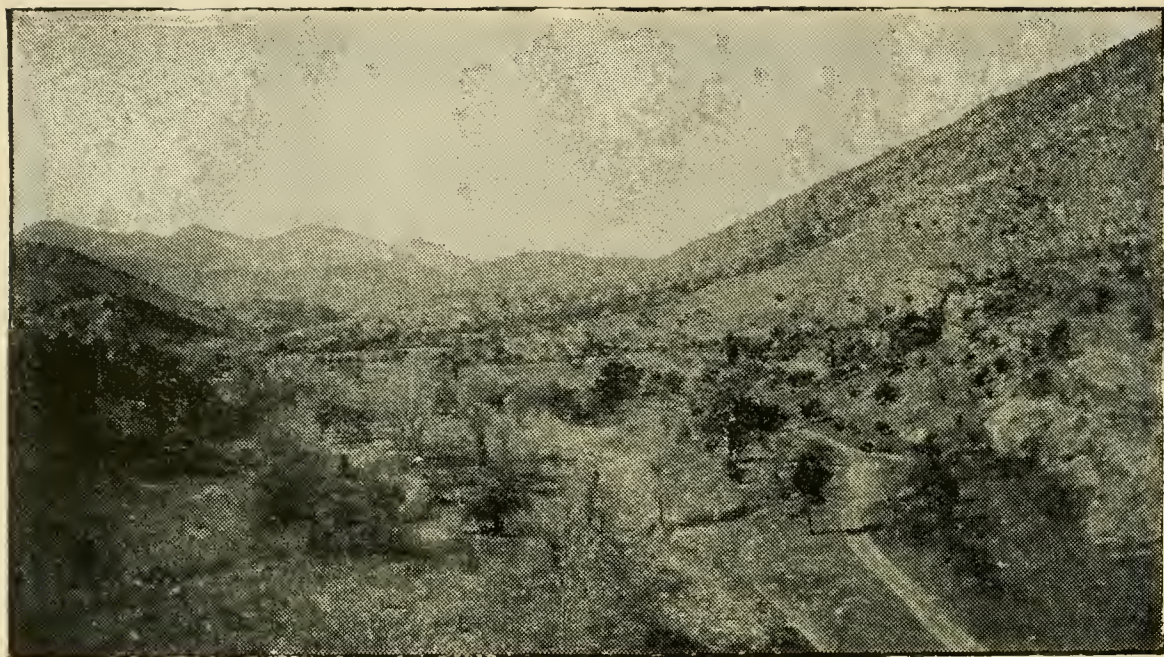
Area 3,081 square miles. Population, census of 1900, 3,168. Present population, 5,000. Assessed valuation in 1903, \$1,326,920. County seat, Hillsboro. Post offices: Hillsboro, Lake Valley, Engle, Fairview, Chloride, Las Palomas, Andrews, Kingston, Arrey, Hermosa, Monticello, Shandon, Philipsburg and Tierra Blanca.



SCENES NEAR HILLSBORO.

Sierra is one of the smallest of New Mexico counties, only six having a less area, yet it covers 1,971,960 acres, or 3,081 square miles, three times the area of the State of Rhode Island and more than one and a half times the area of the State of Delaware. Of this, 1,775,000 acres are subject to entry under the federal land laws, of which 274,379 acres are unsurveyed. Only 112,600 acres have been appropriated, and 84,000 acres are reserved. The census of 1900 gives the value of farms and live stock as \$1,829,000.

Sierra county is rough and unbroken and the water supply is scant, the precipitation ranging from four to six inches during the summer, while the total per annum is probably in the neighborhood of ten inches. Irrigation is generally confined to the valleys of the few small streams flowing eastward toward the Rio Grande. None of these, however, discharge water into the river, excepting during seasons of excessive snowfall or heavy summer rains. Although the water supply is small, it is constant and probably on this account a higher duty of water is reached in this district than in any other portion of the Territory. Altogether there are about 5,000 acres under cultivation, but with the available water supply, probably 50,000 acres could be cultivated. Dairy products are in demand and bring high prices. Anything that will grow in southern Kansas and Oklahoma will grow here. Crops are certain, for by irrigation the farmer escapes the vicissitudes of floods and drouth. Fruit does exceedingly well in the river valleys and there are a number of fine bearing orchards. Natural reservoir sites are numerous. At comparatively small expense these advantages can be utilized for the storage of flood waters. The county has a fine range. It is one of the best stock counties in the Territory. There is a good underground water supply that can be developed by wells. Sheep men and goat raisers are beginning to realize that on account of the mild winters and the good range, Sierra county is a fine sheep and goat raising country. The county takes the lead in the New Mexico goat industry. In fact, its fame in that direction, is becoming national. Some of the highest grade prize Angora ewes and bucks are to be found on its famous goat ranches and the names of the leading goat raisers



SCENES AT HILLSBORO.

are known in every one of the most important goat markets of the United States. The industry is proving very profitable.

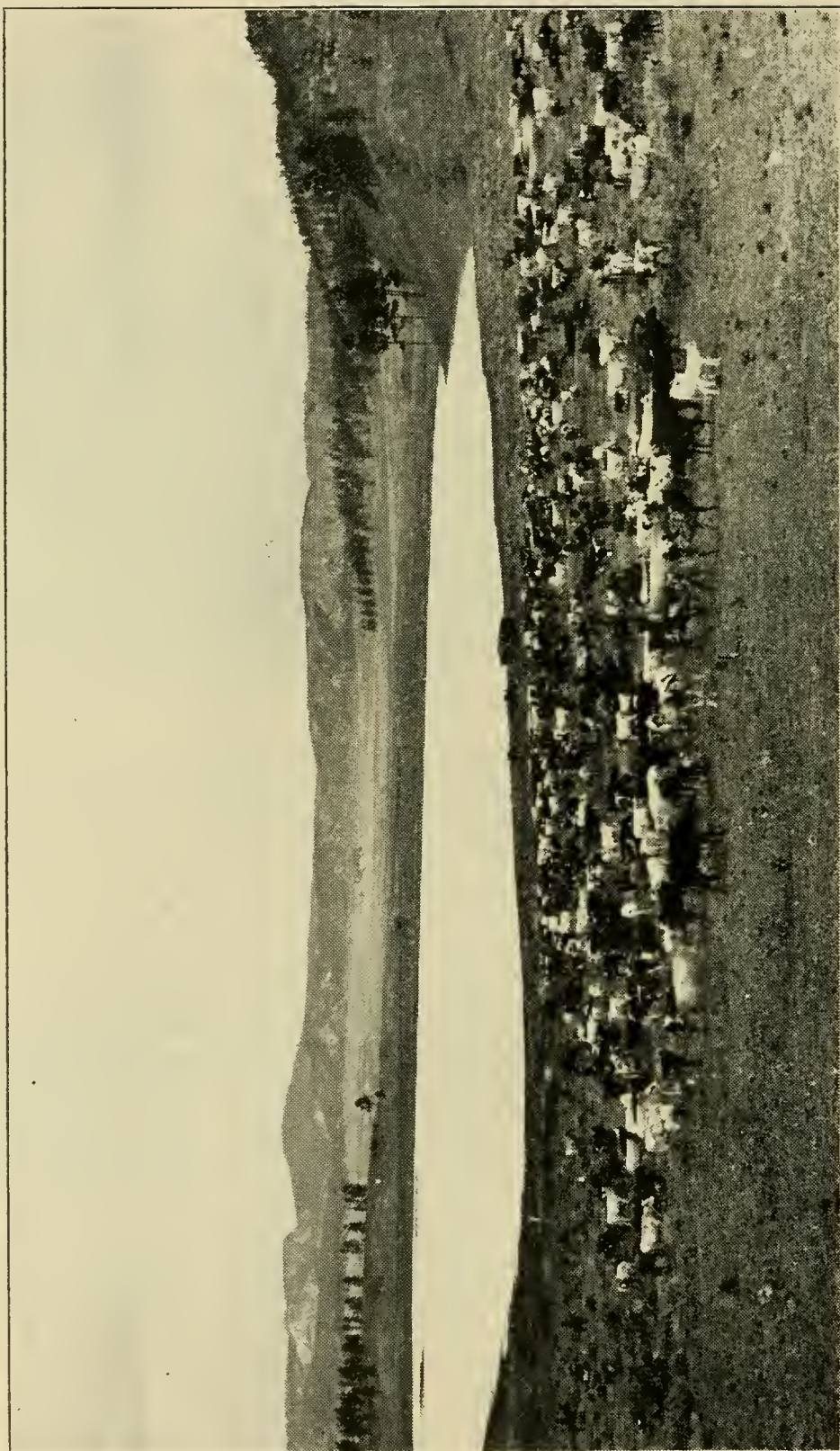
The county is a treasure house of precious metals. It has produced millions of dollars worth of gold, silver and lead. The most important mining camps are Hillsboro, Lake Valley, Kingston, Fairview, Philipsburg, Shandon and a number of camps in the Black Range. The Santa Fe Railway passes through Sierra county from north to south. At Palomas Hot Springs are springs of remarkable medicinal virtue.

Hillsboro

is the largest settlement in the county and is the county seat, the court house being a handsome brick and stone trimmed structure. The town is reached by stage from Lake Valley in two hour's ride, the distance being less than sixteen miles. The town has a bank, a weekly newspaper, the Sierra County Advocate, good stores and is surrounded by gold and silver mines and placers reached by good roads. It is the oldest mining camp in the county, its mineral resources having been discovered in 1868. The predominating ore of the district is a quartz impregnated with copper and copper pyrites and carrying gold in the proportion of one ounce to four or five of silver. The surface ores to a depth varying from fifty to 150 feet, are much oxidized and constitute free milling ore. Copper is an important product, varying in percentage to the ton from one to twenty. There are four mills in and around Hillsboro. East of the lode mines is an extensive area, comprising several thousand acres and known as the placers. With crude dry washers some \$500,000 in gold have been taken from these placers. In the valley between Hillsboro and the mines are warm springs having medicinal and curative properties.

Socorro County.

Socorro county is the largest of New Mexico counties, covering an area of 15,250 square miles, being as large as a European kingdom. Its resources correspond to its area, in variety and extent. It is first of all a stock grazing country, the number of sheep on its ranges going into the millions, and the number of cattle exceeding 100,000. Next to stock raising, mining is a great wealth producer, the Mogollon



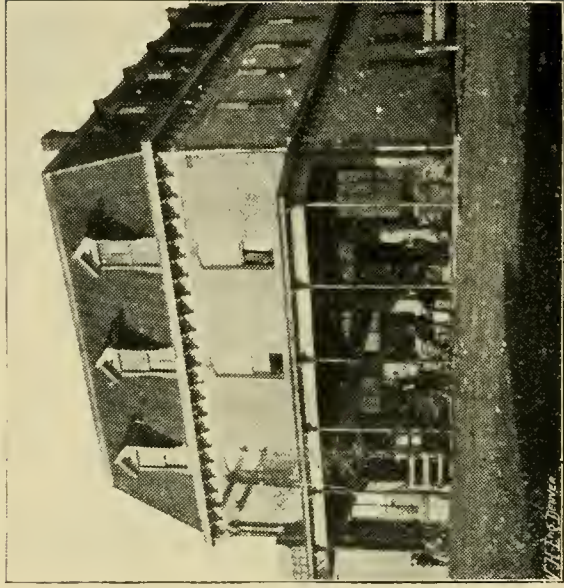
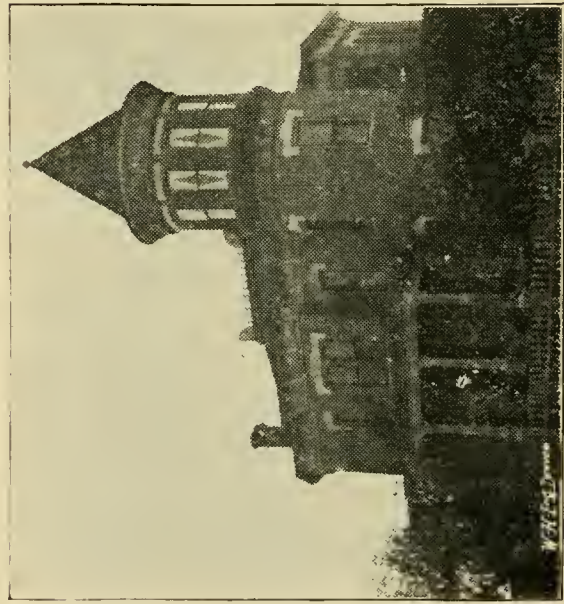
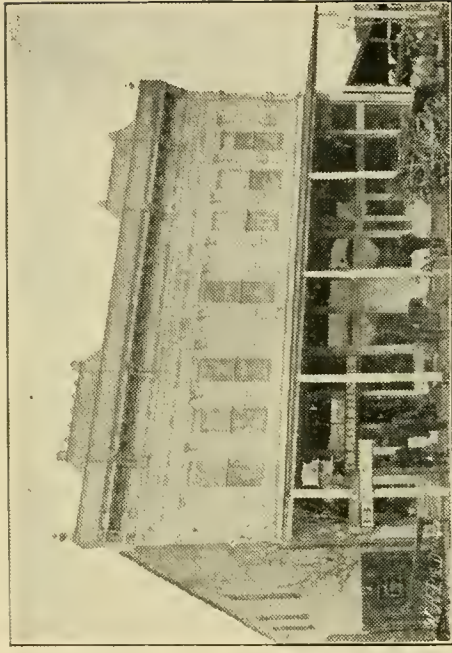
LAKE IN THE AMERICAN VALLEY, SOCORRO COUNTY.

district alone has yielded \$5,000,000 in gold and silver. The Magdalena and Kelly districts have done almost as well in silver and lead and are now big producers of zinc. Rosedale produces gold, Estey copper and Water Canon, Socorro and other districts, the precious as well as the baser metals. There are extensive coal beds in the western part while the coal veins at Carthage are being actively worked. Lime, building stone, gypsum and salt are among the other mineral products. Agriculture in the Rio Grande Valley and along some of the minor streams is very successful. In the southwestern part, especially in the Gila Forest Reserve, there are large areas in timber. The Rio Grande traverses the county. Its principal tributary here is the Puerco. The Gila and the San Francisco rivers are important water sources in the western portion. The Santa Fe Railway, with a branch line from Socorro to Magdalena, furnishes railroad facilities. The population is 15,000. The post offices are: Alma, Burley, Bernardo, Bursum, Cienega, Clyde, Cooney, Datil, Estey, Frisco, Graham, Gran Quivira, Joseph, Jornada, Kelly, La Joya, Lava, Lemitar, Luna, Magdalena, Mogollon, Patterson, Puertocito, Polvadera, Paraje, Quemado, Rosedale, Reserve, Salt Lake, San Acacia, San Antonio, San Marcial and Socorro.

In the county are greater areas of undeveloped natural wealth than in any other part of the Territory. The prospector, the farmer, the manufacturer, the reservoir and railroad builder all can find inducements here, which are worthy of careful investigation.

Socorro,

the county seat, is also the largest town. The census of 1900 gave it 1,515 inhabitants. The country round about is rich in mineral and agricultural resources. The waters of the Rio Grande, which flow near the city, are ample to irrigate a large area, the waters of the Puerco and the Salado augmenting its volume considerably twenty or thirty miles north. The Carthage coal fields are so near to Socorro that they may be called tributary to the city, and the mining camps of Kelly, Magdalena and Water Canon, are also tributary, making it a favorable smelter site. The town has large brick yards and three flouring mills. The city is beautifully situated on a table-



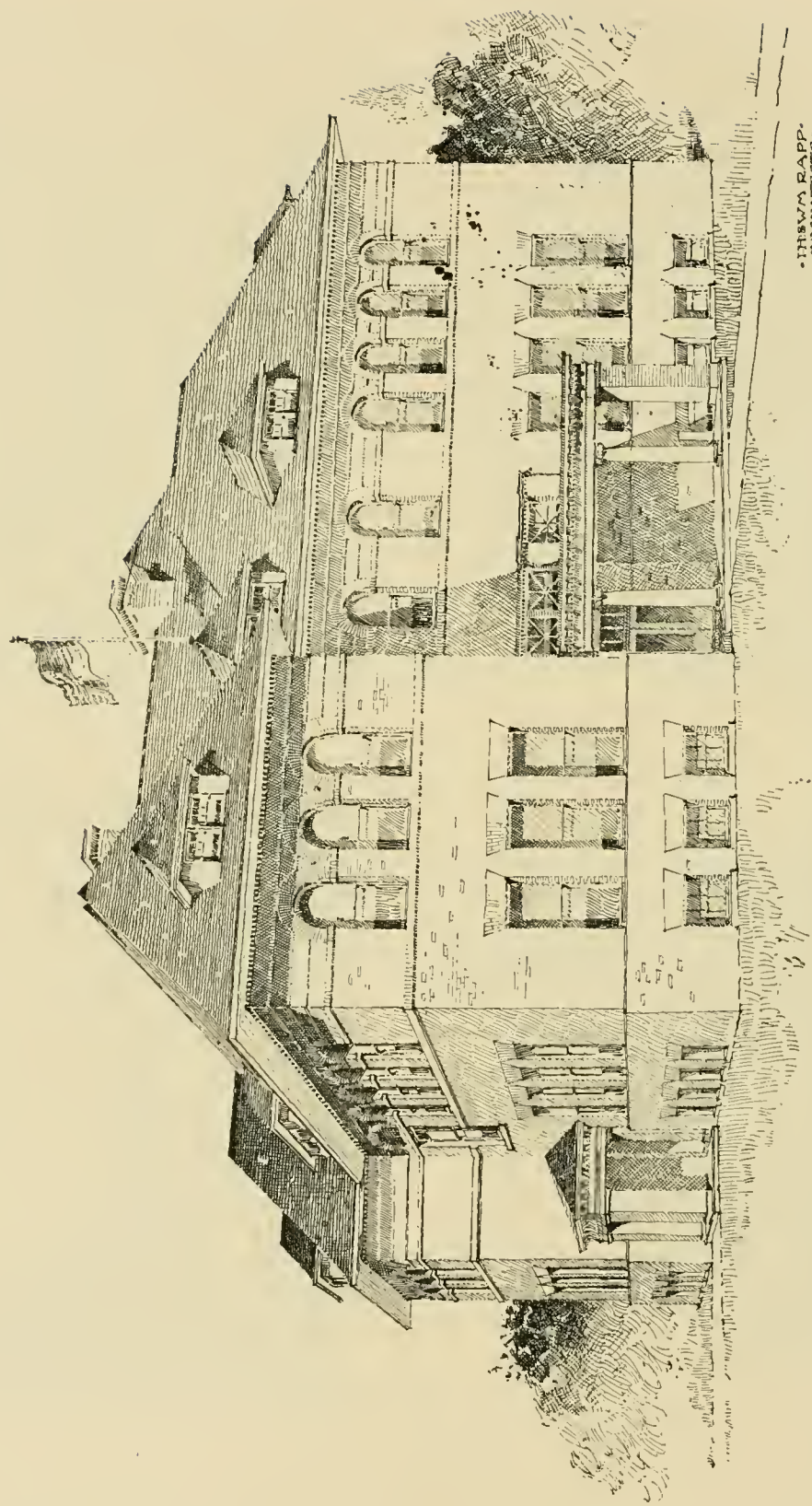
SCENES IN SOCORRO.

land at the foot of Socorro mountain. The Rio Grande is about two miles from it. The city owns and controls its own water works, the supply being derived from warm springs of exceptionally pure water flowing from the base of Socorro mountain. The town has two banking institutions, two weekly papers, the Socorro Chieftain and El Defensor del Pueblo, two substantial school buildings, churches and good business houses. The New Mexico School of Mines is located here. Its elevation is 4,567 feet.

San Marcial,

the second largest town, is attractive for the reason that twenty-one years ago the Atchison, Topeka and Santa Fe Railway Company planted great avenues of cottonwood trees, and these have constantly been added to by citizens, until now the town is known far and wide for the beauty and coolness of its groves. It is important commercially because it is the supply point for a large area of country. Four mercantile firms draw trade from a wide territory occupied by people engaged in the cattle and sheep business, and the neighboring towns of Clyde, Rosedale, Paraje, Engle and Chloride. Its population is a little above the 1,000 mark.

The town has a beautiful park. It is a division headquarters of the Santa Fe Railway Company and here are located a round house and repair shops. A modern flouring mill is conducted for the convenience of a large number of farmers in the rich Rio Grande Valley. Fruitful orchards surround it, and it is a rich agricultural, horticultural, live stock and mining region. Alfalfa is extensively grown, and when there is an ample supply of water, which is taken from the Rio Grande through ditches, four crops in one season are of common occurrence. This finds a ready market, the price per ton ranging from \$10 to \$14. There is a good public school building and there are several churches. The town has a weekly newspaper, the San Marcial Bee. There is a bank and there are a goodly number of business firms. Located near the center of the Territory, at an elevation of a little over 4,000 feet, the climate makes it a sanitarium for consumptives. Here are to be found all the conditions for a healthy and happy life, with the opportunities to realize the



THOMAS RAPP
ARCHITECT

NEW PUBLIC SCHOOL BUILDING AT SANTA FE.

maximum of profit in the lines of agriculture and horticulture. San Marcial is not devoid of historical interest. One of the features of the town is a large and extensive promontory known as the mesa. Here occurred the battle of Valverde, fought February 20, 1862, by General Sibley's Texans and the Union forces under General Canby. The severest part of the battle occurred about the present site of San Marcial. Frequently cannon balls and other relics are plowed up on the east side of the river.

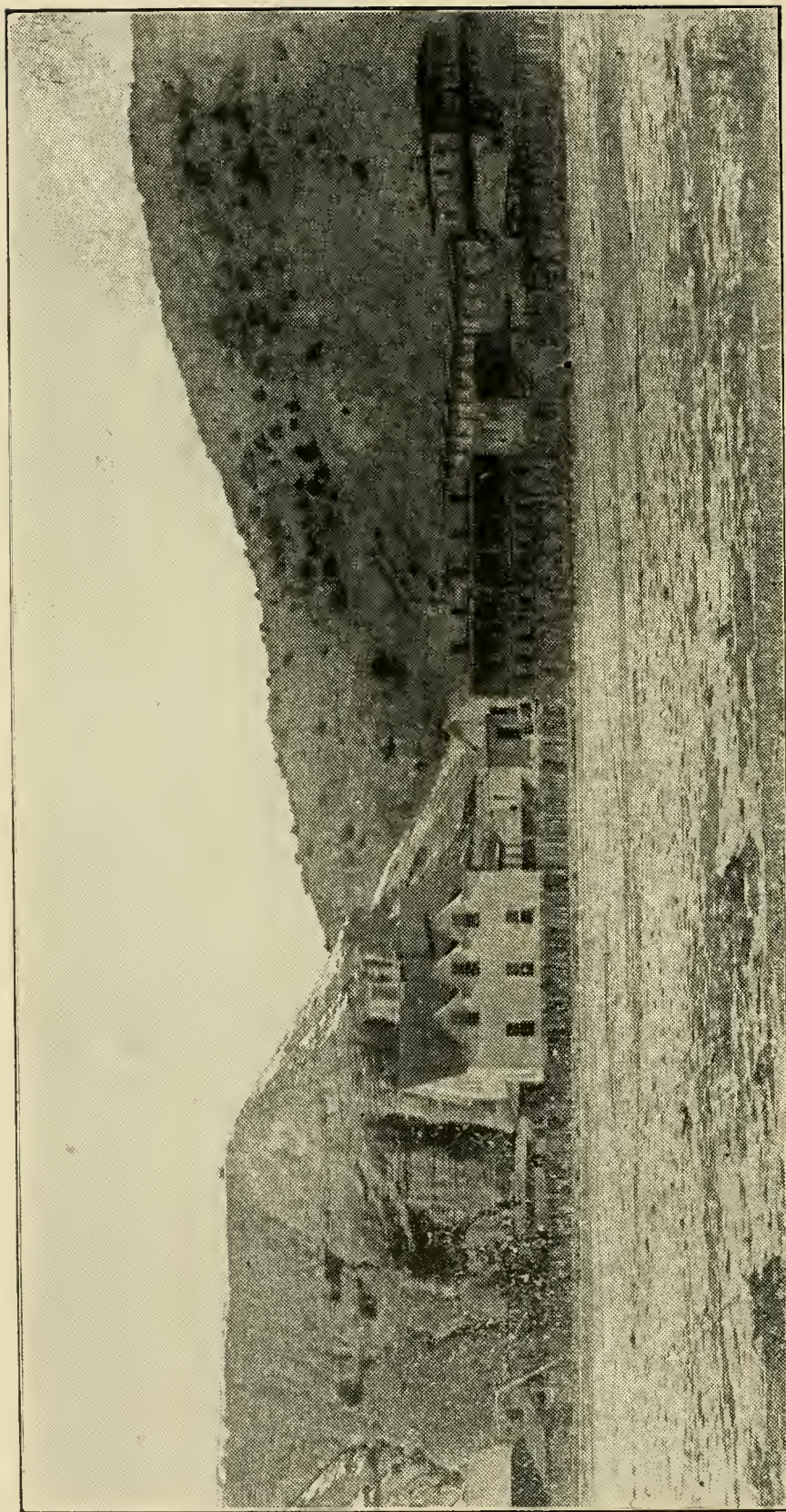
Carthage

is a prosperous coal camp and is being connected by railroad with San Antonio, a lively commercial center on the Santa Fe Railway. At San Acacia, a weekly newspaper, *El Comercio*, is published. Near the settlement are copper ore deposits. Mogollon and Cooney are famous mining camps.

Taos County.

Area 2,265 square miles. Population 13,000; census of 1900, 10,889. Assessed valuation in 1903, \$677,820. County seat, Taos. Post offices: Taos, Ranchos de Taos, Llano, Penasco, Arroyo Seco, Questa, Arroyo Hondo, Cerro, Red River, Tres Piedras, Costilla, Ojo Caliente, Midnight, Agua del Lobo, Trampas, Twining, Valdez, Pima, Talpa and Chamisal.

The county is the most picturesque and in many respects one of the richest in mineral resources in New Mexico. It is also one of the oldest in point of settlement by white men and one of the best watered. At one time it included Colorado south of the Arkansas river, Colfax and Mora counties and part of Rio Arriba county, but at present it is small in extent. Yet, its area is 1,470,000 acres, or 2,265 square miles, being more than twice the area of the State of Rhode Island and 305 square miles more than the State of Delaware. Of this almost one-half, or 650,000 acres, are open to entry under the federal land laws; 300,000 acres are still unsurveyed. About 120,000 acres are reserved and 700,000 acres are appropriated, about 600,000 acres being included in private land grants. The county is one of the most densely populated in the Territory, but could support five times its present population. The Rio Grande traverses it from north to south,

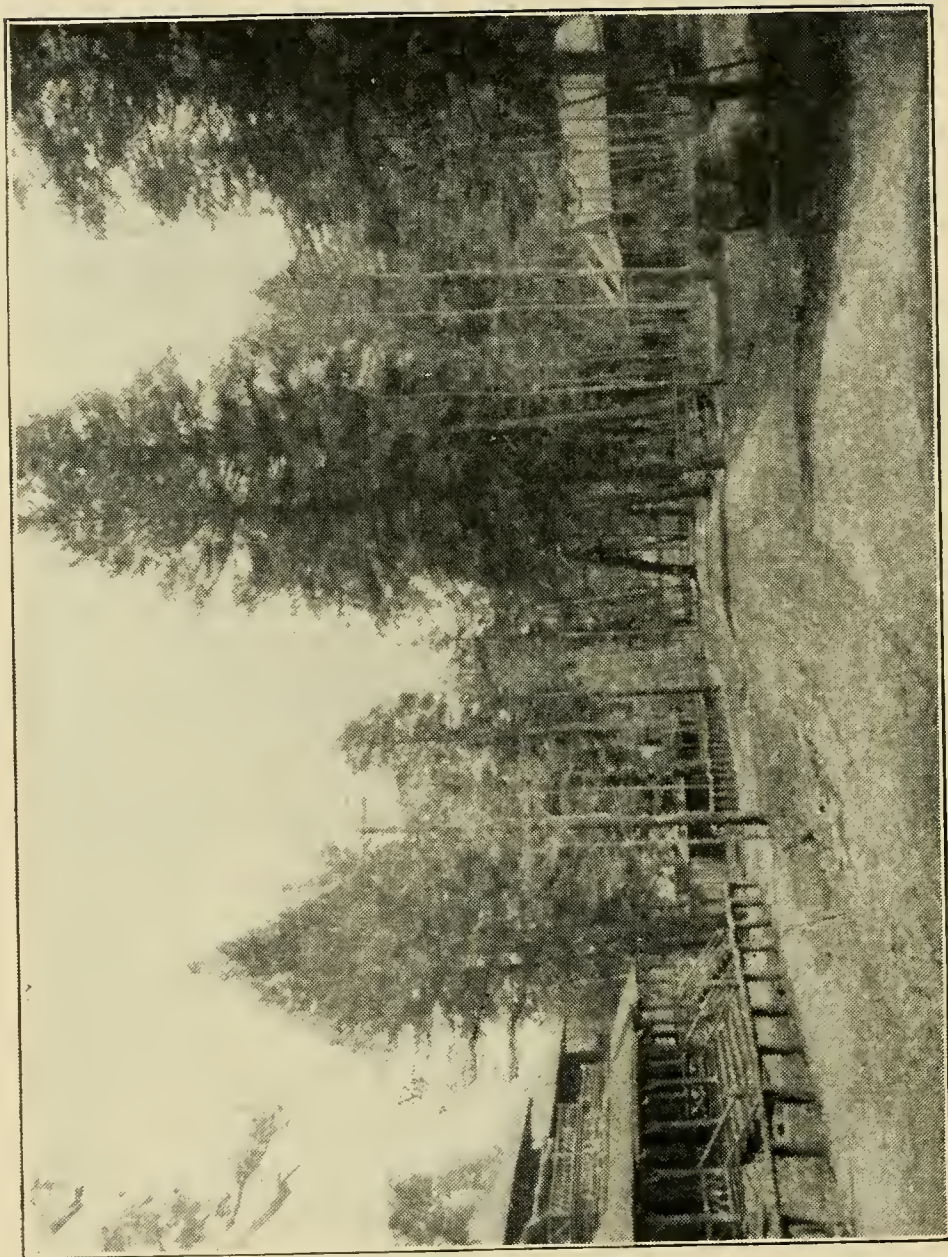


OJO CALIENTE (Hot Springs), TAOS COUNTY.

but through rocky gorges, hence the cultivated lands are along its tributaries. The county is characterized by the great number of small perennial streams which, rising in high ranges on the east, debouch at about one-third the general width of the district upon the high mesas forming the central and western thirds and flow into the Rio Grande.

The Taos range, comprising the catchment area from which these streams derive their waters, ranges in altitude from 7,000 to 13,000 feet above sea level, with slopes tree-clad and with precipitation greater than in many sections of the Territory. Only one-half of the available water is used and with the building of storage reservoirs, the area under cultivation would be 200,000 acres instead of 20,000 acres. The cereals yield prolifically and vegetables and fruit grow well. The county is rich in gold, copper ores and other minerals, the principal mining camps being Red River, Glenwoody and Twining. There are a number of lesser camps. About 200,000 sheep, 10,000 goats and 5,000 cattle graze on the ranges. At Ojo Caliente are famous medicinal hot springs. At Wamsley and near Taos are also hot springs which attract many healthseekers. The railroad facilities are meager. The Denver and Rio Grande has not quite fifty miles of narrow gauge tracks in the extreme western part, near the Rio Arriba boundary line, but Tres Piedras is the only settlement of any consequence it touches, although there is also a station at Embudo, which is several miles from the town of that name. The scenery along this railroad, especially from Embudo to Barranca, is among the grandest in the southwest. From Embudo and Tres Piedras stations to Taos there are roads with daily stage lines, while the mining camps of Red River and Amizett and the settlements of Cerro and Questa also have road connection as have to a lesser extent all the post offices. Recently a new road was completed from Taos to Servilleta, on the Denver and Rio Grande Railroad, making the distance from the county seat to the railroad only twenty-two miles.

Portions of the county are heavily timbered. On account of the difficulty in bringing the merchantable timber from the steep mountain sides to the railroad, saw mills are in



CLOUDCROFT, OTERO COUNTY.

operation in various parts, the principal being near Questa, Truchas and Twining.

Fernandez de Taos

is the county seat and is romantically situated in a beautiful valley surrounded by mountains which rise abruptly from the plain. It is a very interesting town, quaintly built around a large plaza. The Roman Catholic church is of great antiquity. Before the advent of the railroads in New Mexico it was a commercial center of great importance and even today enjoys a good trade. Among the early American residents were Col. Kit Carson, Governor William Bent, who was assassinated here during the Pueblo insurrection, Colonel Ceran St. Vrain, Judge Beaubien, Lucien Stewart and others. Here the first printing press west of the Missouri river was set up in 1837 by Rev. Antonio J. Martinez and the first newspaper, *El Crepusculo*, was published. A good public school, mission schools and a Loretto academy are the educational facilities of this town. A weekly newspaper, printed in English and Spanish, called *Revista de Taos*, is published here. It has a population of 1,500. Only three miles to the northwest, under the shadows of the great mountains, and occupying both sides of a clear bright river, is the Pueblo of Taos, undoubtedly the most interesting Indian settlement on all the Western Continent. Scores of tourists come to visit it annually, especially on its annual feast day, San Geronimo, September 30. The Jicarilla Apache Indians, the Navajoes, as well as the pueblos from the south, send delegations to this festival, and the settlers from scores of miles around gather at the pueblo on that day. The population of the pueblo has decreased in numbers the past few decades, and is but few over 400 at present. The Indians cling tenaciously to their primitive customs. Ranchos de Taos is four miles south of Fernandez de Taos and is the largest settlement. It has two flouring mills and is surrounded by orchards. It is the center of 60,000 acres of fertile land, of which one-sixth is under cultivation. It has a public school and is the headquarters of the Presbyterian missions of this section. The population is 1,800.



WAMSLEY'S CROSSING OVER THE RIO GRANDE, TAOS COUNTY.

Red River

is a romantically situated mining camp with about 300 population, a good public school, and a weekly newspaper, the Red River Prospector.

Tres Piedras

is a railroad, mining and lumber town on the Denver and Rio Grande Railroad and a distributing point for the Bromide and Good Hope mining districts in Rio Arriba county, and the terminus of a daily stage line from Taos. A newspaper, the Mining Reporter, is published here.

Embudo

is a prosperous agricultural settlement on the Rio Grande, situated at the foot of high mountains. It has a railroad station several miles south of it, from where a daily stage line for Taos, Twining and other points starts. It has a public school and a mission school.

Twining,

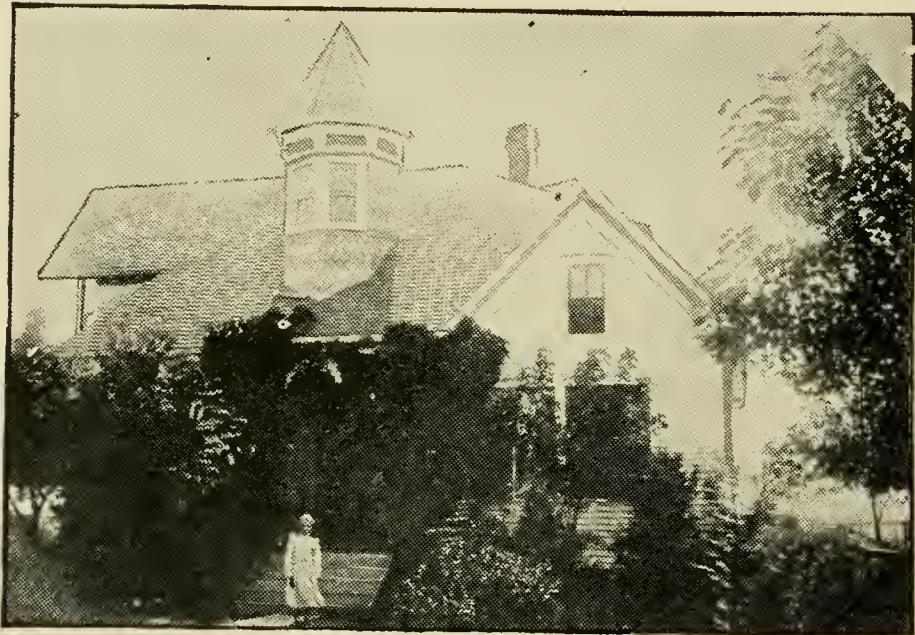
formerly Amizett, is a mining camp, with several hundred inhabitants. It is the headquarters of the Fraser Mountain Mining Company. The mill, smelter, electric power and light works, offices, etc., of this company are situated here.

Questa and Cerro

are prosperous agricultural settlements. Costilla, Pima, Agua del Lobo, Arroyo Seco, Llano, Trampas and Penasco, are agricultural settlements surrounded by fertile lands under cultivation. Picuris is a quiet Indian pueblo with a population of 100 and several historic buildings.

Union County.

Area 6,037 square miles. Population, census of 1900, 4,528. Since then the county has given 255 square miles to the formation of Quay county. Its present population is 6,500. Assessed valuation in 1903, \$2,021,640. Post offices: Clayton, Folsom, Albert, Barney, Beenham, Bryantine, Bueyeros, Clapham, Genova, Leon, De Haven, Exter, Pasamonte, Telesfora, Veda, Logan, Cuates, Gladstone, Nara Visa, Garcia and Gallegos.

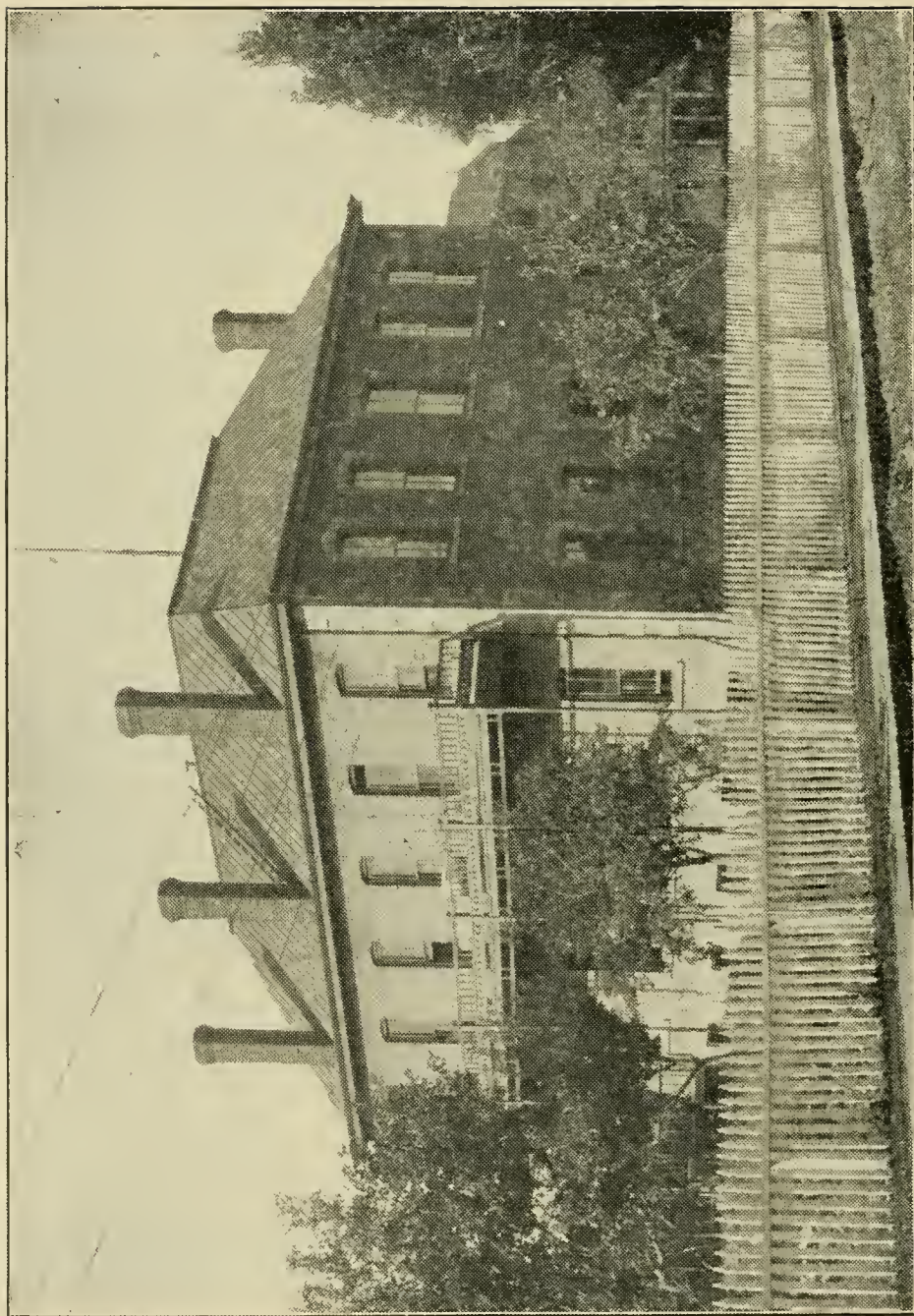


SCENES AT CLAYTON, UNION COUNTY.

Union, the northeastern county of New Mexico, was formed in 1893 out of portions of Colfax, Mora and San Miguel counties. This county is the seventh in size in New Mexico, and the seventeenth in population. It is more than five times as large as Rhode Island, three times as large as Delaware and as large as the Hawaiian Islands. Of its area only 727,000 acres have been appropriated, while 3,140,000 acres are still subject to entry under the United States land laws or to lease from the territorial land board, which controls large tracts in the county under the United States donations to the territorial institutions and the public schools.

Stock raising is the principal industry and the source of its wealth. It is one great range, well adapted to cattle growing and sheep raising. The mild winters, the free range and the flourishing grasses, make stock raising very profitable here. Of the 60,000 cattle on the range many are a good grade of Herefords, and a number of model stock farms are to be found. The number of sheep exceeds 600,000, it leading all others in the territory in the sheep industry. At Clayton, the county seat, 3,000,000 pounds of wool are sold annually, while buyers of lambs for feeding and breeding purposes, make frequent visits to Clayton and Folsom. Each year 100,000 lambs are shipped to Colorado and Kansas City points, where they are fed for market. Of late years quite a number of cattlemen have been raising alfalfa on a small scale for feeding purposes. Altogether about 2,000 acres have been put under cultivation. The sheep growers will undoubtedly soon follow this example. The cattle men are rapidly improving their stock by importing registered cattle from the states. The raising of goats is a growing industry as well as the breeding of horses for market, both proving profitable. Railroads afford good facilities for the shipment of stock.

Whenever water is available for irrigation purposes, crops of grain, vegetables and fruits can be raised with unvarying annual success. There are a number of orchards in which every variety of fruit of the temperate zone is raised. Wild fruits and nuts grow in abundance along the streams and on the mountain slopes. If the flood waters which run down the river beds at certain seasons were stored, fully 100,000 acres could be brought under cultivation. Many natural reservoir



ST. VINCENT'S HOSPITAL AT SANTA FE

sites exist. Ten miles west of Folsom, commences the Johnson mesa, 8,000 feet high, extending into Colfax county almost to Raton, on which without irrigation fine potatoes are raised, also large crops of oats.

Mining is in its infancy, but there are undoubted indications of gold, silver, copper and lead ores in various precincts. Coal deposits exist in the northern part, the veins being an extension of the Trinidad fields in Colorado. A good grade of bituminous coal is found near Clayton, and development work is being done in a desultory way. The distance from the railroad prevents these prospects from becoming producers. Coal veins also underlie Johnson's mesa.

Indications of oil can be pointed out along many streams, and often in drilling for water, oil sands and rock are struck. Fine mineral springs are at Folsom, and there is but little doubt that artesian water will be found at a moderate depth. On Ute creek are deposits of pure alum, while excellent lime quarries are found and worked near Folsom.

The Colorado and Southern Railroad crosses the northeastern corner for a distance of eighty-four miles. The Chicago, Rock Island and Pacific Railroad passes through its southern part.

The climate is as good as is to be found in the United States. The altitude ranging from 4,000 to 8,000 feet, giving the air a lightness that is especially beneficial in pulmonary troubles. The nights are always cool and the summer heat is moderated by the altitude as well as the cool breezes from the mountains, while the cold in winter is tempered by the constant sunshine and protection which the mountains afford from high winds. The county seat is

Clayton,

situated in the northeastern part on the Colorado and Southern Railway. Here the federal land office for the northeastern part of New Mexico is situated. The town has a population of 800. It has electric lights and water works, a telephone system, a very good public school system and a fine public school building, Methodist, Baptist and Christian churches many business establishments, a \$20,000 court house, and contains nice homes. From here 3,000,000 pounds of wool, 160

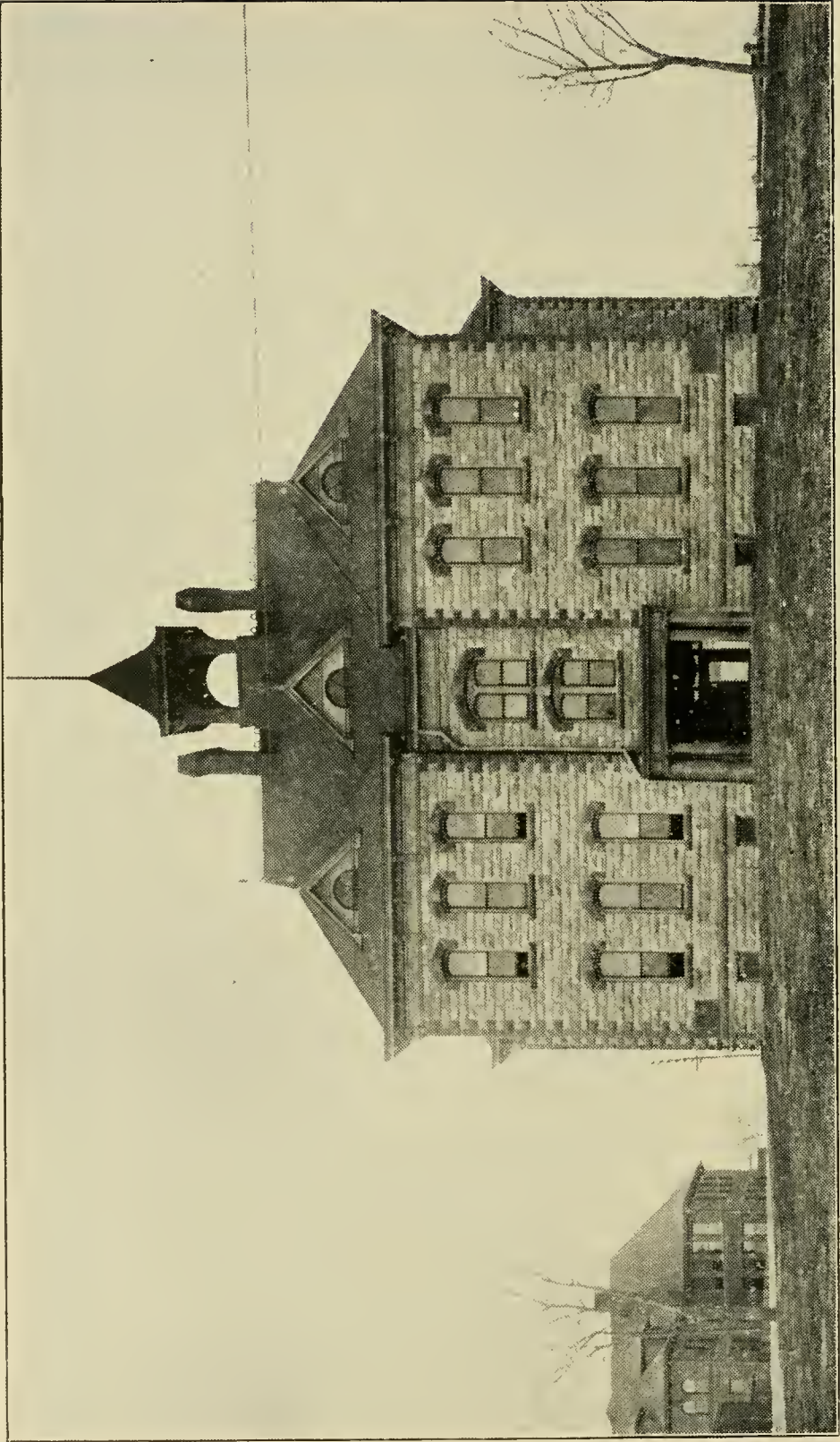


PACKING FRUIT IN A SAN JUAN COUNTY ORCHARD.

carloads of cattle, and 400 carloads of sheep and lambs are shipped annually. Two weekly newspapers, one in English, the Clayton Enterprise, and the other in Spanish, El Fenix, are published here. There is a national bank here. Of late years the town has attracted many healthseekers. Coal deposits are being worked in a small way near Clayton.

Folsom

is the second largest town, having a population of 750. It is situated on the Colorado and Southern Railway and is gaining fame as a health resort. It is 6,400 feet above sea level and is located in a beautiful valley. The Sierra Grande, twelve miles distant, rises to an altitude of 11,500 feet. During the summer months this mountain is one mass of flowers, and is a magnificent sight. Sierra Capulin, five miles from the town, is 9,500 feet high and is an extinct volcano with a perfect crater. The view from Capulin is grand. Nine miles from Folsom, on the Colorado and Southern Railway, are the so-called American Alps. Emery's Peak and Buffalo Head are also visible. Twin Mountains, Robinson's Peak, Dale's Peak and Red Mountain can be seen on clear days, and 330 days each year are clear at Folsom. The Cimarron Falls near the Hotel Capulin, a sanitarium built at a cost of \$75,000 but not completed, are grand. Numerous springs bubble forth from the sides of the mountains inclosing the valley of the Cimarron in which Folsom is situated. The waters of some of the springs are almost absolutely pure, while others are charged with mineral and cure persons suffering from gout, rheumatism, neuralgia, stomach troubles and certain forms of kidney disease. Several sulphur springs and sulphur wells near Folsom are beneficial to persons suffering from skin diseases and impure blood. The most celebrated spring is in Oak canon, near the town, the waters of which are superior to those of the famous springs at Manitou, Colorado. These waters contain sulphur, magnesia and carbonic acid gas. Folsom is an important trade center. Immense sheep dipping tanks have been erected here by the Colorado and Southern Railway and the shipments of wool, sheep, lambs and cattle from this point annually are very large. It has an \$8,000 public school house. Water is found anywhere in the Cimarron



PUBLIC SCHOOL BUILDING AT LAS VEGAS.

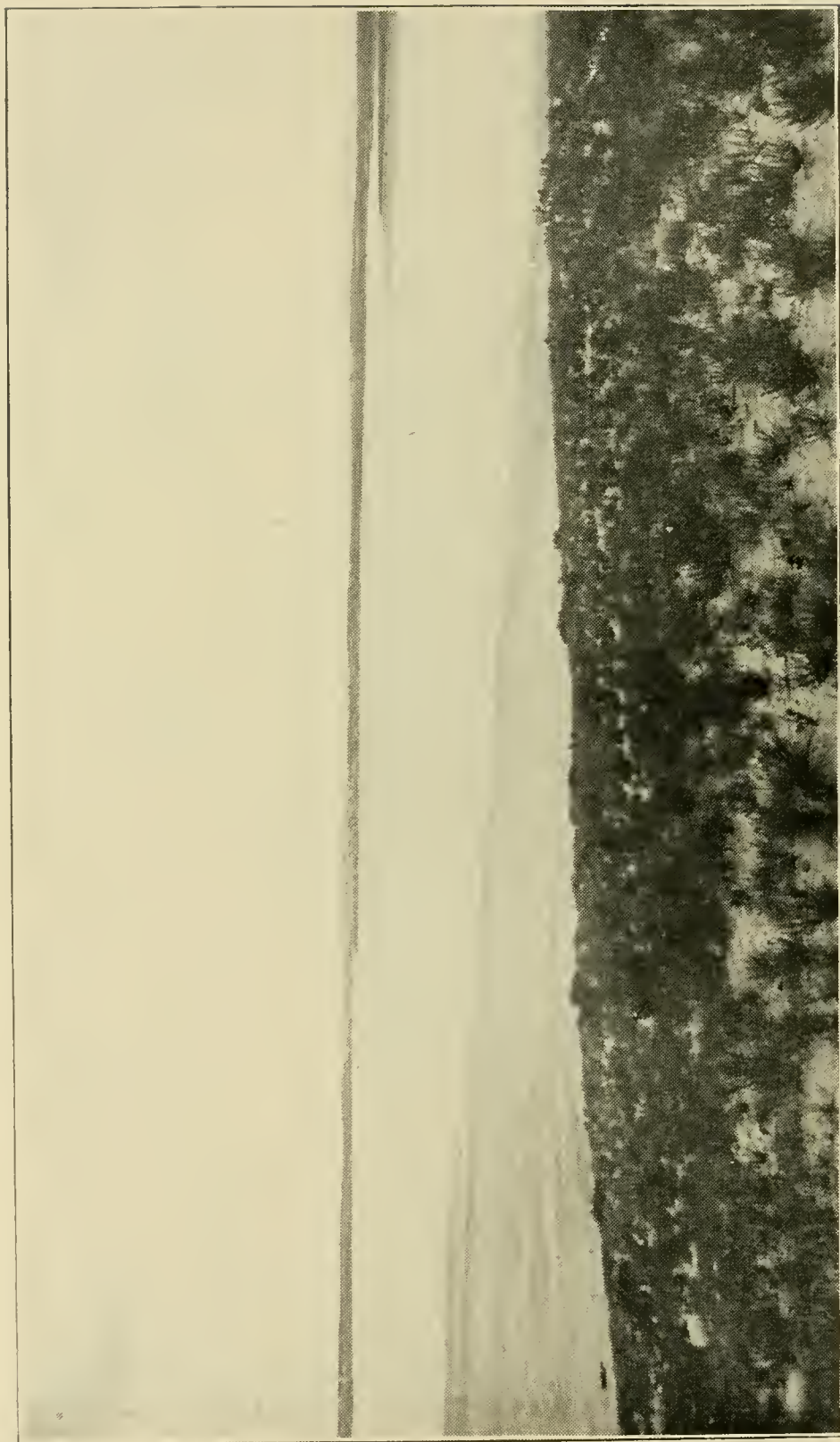
Valley at a depth of from fourteen to thirty feet and is free from alkali. Indications of gold, silver, copper and lead ores and coal are found near the town. Lime quarries are located near and the product is being utilized in the manufacture of plaster.

Valencia County.

Area 7,944 square miles. Population, census of 1900, 13,895; present population, 18,000. Assessed valuation in 1903, \$1,359,786. County seat, Los Lunas. Post offices: Belen, Los Lunas, Jarales, Peralta, Tome, Publitos, Duran, Pinos Wells, Mountainair, Amado, Bluewater, Copperton, Cubero, Grant, Kettner, Laguna, Marquez, San Mateo, San Rafael, Sebolleta, Eastview, Manzano, Tajique, Torreon, Willard, Estancia, Punta and Encino.

It is the third largest of New Mexico counties, covering an area of 7,944 square miles, which is more than seven times the area of the State of Rhode Island; more than four times the area of the State of Delaware; almost twice the area of the State of Connecticut, and greater than that of Hawaii. Of this vast stretch 3,400,000 acres are still unappropriated and are being taken up at the rate of 10,000 acres a year by homesteaders. Quite a large portion is included in private Spanish and Mexican grants, while about 401,000 acres are reserved.

The principal stream is the Rio Grande, which passes through the county from north to south. There is a large area of irrigated land on both sides of the river along its entire course. The Puerco, which at times has a flood discharge of about 32,000 second feet, is a tributary of the Rio Grande and flows through the county. Along the Puerco and its tributaries, something like 14,000 acres are under irrigation. The character of the country through which the Puerco passes is hilly and broken. Its altitude ranges from 4,000 to 7,000 feet and the annual precipitation is very light, averaging only seven inches. For that reason there are but few perennial streams in the whole drainage area. Naturally, in so large an area as that covered by Valencia county, almost every variety of topography is found. The Continental Divide crosses from north to south. East of the Rio Grande the Manzano is the principal mountain range, forming a water

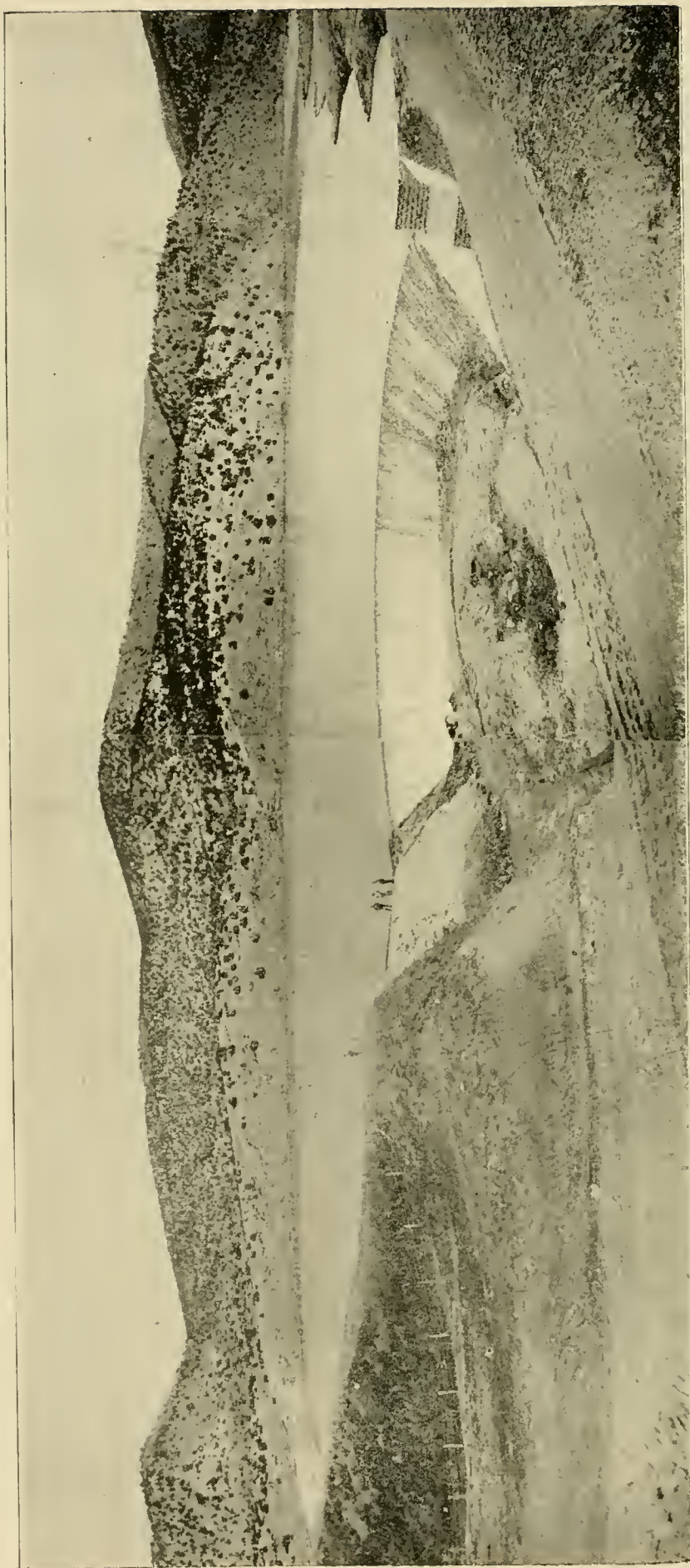


SALT LAKE NEAR ESTANCIA, VALENCIA COUNTY.

shed between the Rio Grande drainage basin and the dry mesas of the eastern part. East of the Manzanos are the Pedernal and the Animas Hills. In the western part the Zuni mountains and the San Mateo range are the principal mountain systems. A vast lava bed extends the entire breadth of the county east of the Continental Divide.

East of the Manzano mountains lies a region of low plains, bounded on the west by the timbered foothills of the Manzanos and on the east by a low and barren ridge, terminating at the north in the hills of Pedernal and at the south in the Animas Hills. The abrupt exposure of the Jumanes mesa bounds this broad valley on the south, while on the north the plains continue almost unbroken to the San Pedro and Ortiz mountains and the rough country east of these groups. The southern portion of this valley is known as the Estancia plains, and is remarkable for the salt and alkali basins which occupy the central portion. The county is rich in minerals, but thus far but comparatively little has been done to make the mineral wealth available. Gold, silver, copper and iron ores, sulphur, lithographic stone, gypsum, brick clay, salt, pumice stone, ochre, building stone, cement, potash and most important of all, coal in almost limitless quantities, are found. During the year 1903, 500 tons of salt were taken from the salt lakes in this county. Gold, silver and copper ores exist in the Zuni mountains, in Hell Canon, where a mining camp has been established, and in the Manzanos. In the Zuni mountains, especially in the Copperton district, considerable development work has been done. Ochre is found in the foothills of the Gallinas, which extend into eastern Valencia county. More salt is exported from this county than from any other in the territory, and is hauled to market by wagons and by the Santa Fe Central Railway.

It has a greater railroad mileage than any other county in the Territory. The Santa Fe Central crosses the eastern part from north to south from Moriarty to Bianca station. The Santa Fe Railway cuts the central portion from north to south, entering south of Isleta and leaving north of Sabinal, a distance of twenty-five miles. The Santa Fe Pacific Railroad commences at Isleta and leaves it northwest of Bluewater, the distance being eighty miles.



RESERVOIR AT SANTA FE.

The El Paso and Rock Island Railway also crosses the eastern part of the county, but east of the Santa Fe Central, entering near the junction with the Santa Fe Central at Torrance, in Lincoln county, and leaving it near Pintada, in Leonard Wood county, a distance of thirty miles. The Eastern Railway of New Mexico, which the Atchison, Topeka and Santa Fe Railway is building to Puerco, will traverse the county from east to west for 160 miles, crossing the Rock Island, the Santa Fe Central at Willard and the Santa Fe line from Albuquerque to El Paso at Belen, forming a junction with the Santa Fe Pacific at Rio Puerco. When these lines are completed, and they will be in 1905, the county will have about 400 miles of railroad. The county has about 200 miles of telegraph and a telephone line extends from Albuquerque to Belen and Los Lunas.

The lands under irrigation are very fertile and the climate is good for the raising of grain, vegetables and fruit. Wheat from Valencia county captured the first premium at the World's Fair at Chicago and again a gold medal at the Charleston Exposition, the wheat weighing fifty and one-half pounds per bushel. Oats grown on a farm six miles from Los Lunas took the second prize at the Columbian Exposition. The principal crops are wheat, barley, oats, corn, alfalfa and all vegetables and fruits of the south temperate zone. Some of the finest orchards in the southwest are located here. Grapes are grown in large quantities, the Mission grape predominating, but other varieties such as the Tokay, Sultana, Concord and Muscat do very well. Alfalfa is a staple crop in some of the valleys in the Zuni mountains and in several other hill districts, crops are grown without irrigation the rainfall being sufficient to mature them. The mild winters, cool summers, good water, nutritious grasses and sheltered valleys and canons have attracted the cattle raiser and the sheep grower. It is one of the leading sheep raising sections in New Mexico; it is estimated that there are within its limits, 400,000 or more sheep and thousands of cattle and horses. Lately, some attention has been paid to the raising of goats, and the success is such that the number of these animals will be very much on the increase during the next few years. At Belen is one of the largest flour mills in the Territory. At Laguna and



BUSINESS HOUSES AT BELEN.

Peralta there are also fine modern flour mills. There are extensive timber lands which of late have attracted the attention of lumbermen and capitalists. The so-called Mitchell tract in the northwestern part covers 300,000 acres, on which it is estimated there are 2,000,000,000 feet of good white pine lumber. The American Lumber Company, a syndicate capitalized at \$8,000,000, is cutting this timber. A logging road has been built from Thoreau on the Santa Fe Pacific to the tract.

Belen

is situated forty miles south of Albuquerque, in almost the exact geographical center of Valencia county, on the west bank of the Rio Grande. It has an altitude of 4,200 feet. Its population is 1,200. The stretch of country in the center of which the town is located cannot be excelled for fertility and productiveness.

Belen stands above all other communities in New Mexico in that it has the largest merchandise establishment; the largest flour mill; is the largest railroad shipping point in proportion to population; raises the best grapes and holds the first prize for wheat at the World's Columbian Exposition at Chicago.

Belen has several well established general merchandise stores, two general wholesale establishments and one roller mill. The First National Bank of Belen attends to the banking business of the place. The Catholics as well as the Protestants have each a comfortable and commodious church edifice. In front of the Catholic church stands one of the most artistic architectural monuments in the southwest, the Felipe Chaves Mausoleum, built at a cost of \$15,000.

The school facilities of Belen are good, there being three schools, the Felipe Chavez Girl's Academy, the Becker school and the public school. The Territory recently established an orphan's school here. The railroad facilities consist of the Atchison, Topeka and Santa Fe Railway connecting the city with the extreme northern and southern portions of the Territory and the country that lies between. The Eastern Railway of New Mexico, now under construction, will give



HOTEL AND DEPOT AT ALBUQUERQUE.

direct connection with the Santa Fe Central Railway and the El Paso and Northeastern.

Los Lunas

is the county seat and is situated on the west bank of the Rio Grande, twenty-four miles south of Albuquerque. The population is 1,000. It has a two story court house and a large Catholic church. There is a substantial bridge across the Rio Grande opposite the town. There are two large general stores here. It is a prosperous shipping point, especially for wool and alfalfa. A rich agricultural and stock region surrounds it. The town is connected by telephone with Albuquerque.

Estancia

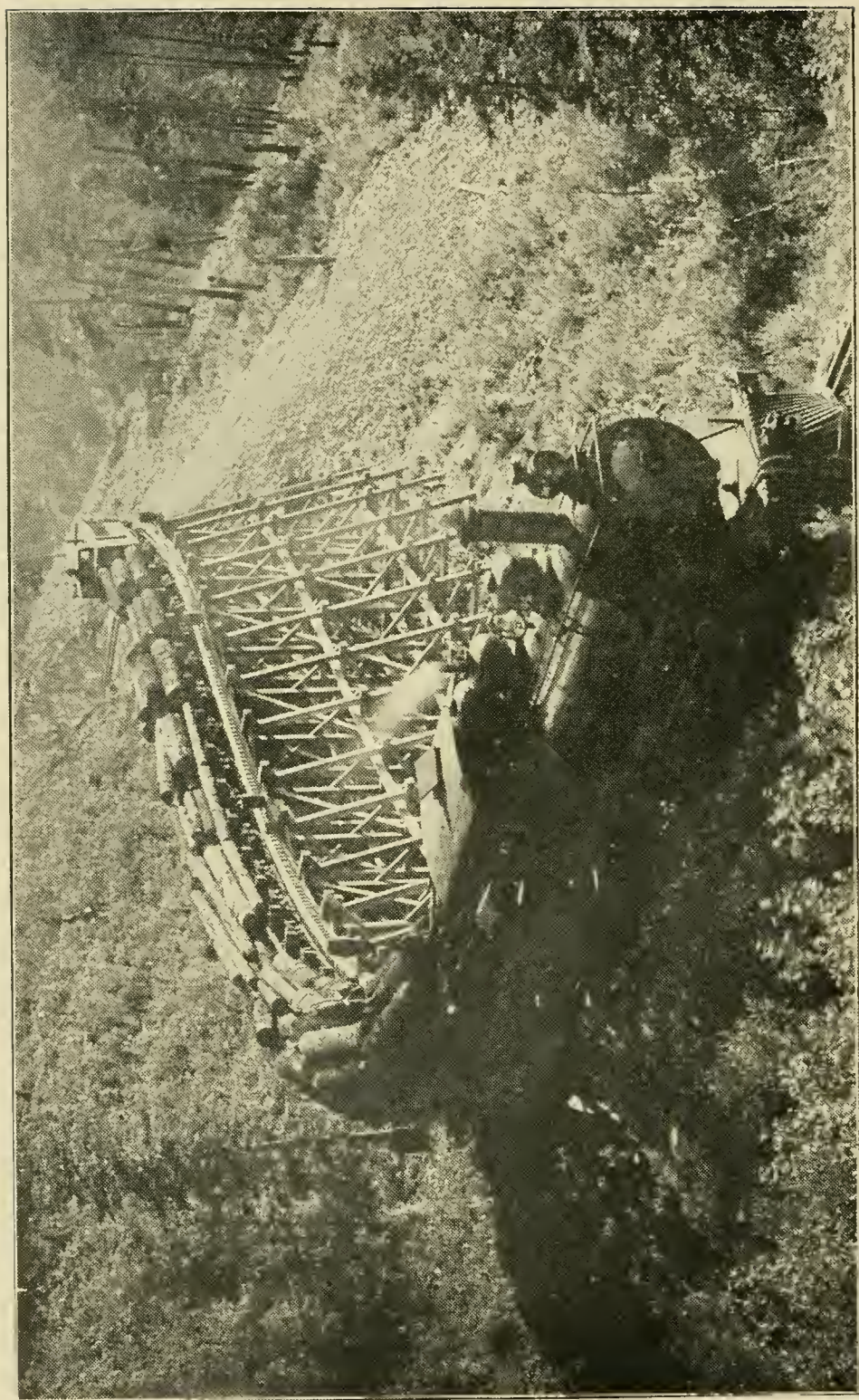
is situated in the eastern part of the county on the Santa Fe Central Railway. It is the center of the beautiful Estancia plains. The Santa Fe Central has located here its railroad shops. The nearby salt and alkali lakes are to furnish the raw material for a salt mill. The town has a good school house.

San Rafael

claims to be the most populous settlement, having 1,500 inhabitants. It is the center of a rich agricultural and stock section, and is located three miles from the Santa Fe Pacific Railroad, in the San Jose River Valley. Forty years ago it was known as old Fort Wingate. The lands around it are irrigated by the waters of El Gallo spring, the largest in New Mexico, filling a ditch of clear water six feet wide at the bottom and forty feet wide at the top. Along this stream there are rich agricultural lands covering 4,000 acres which produce all kinds of grain, vegetables and fruit. The fifth town in population is

Peralta,

the scene of a bloody battle in the Civil War. It is situated in the valley of the Rio Grande opposite Los Lunas and has 800 inhabitants. It is connected by long distance telephone with Albuquerque, twenty miles north. The town has a fine flour mill and five general merchandise stores. There is one Roman Catholic church and one Methodist church building.



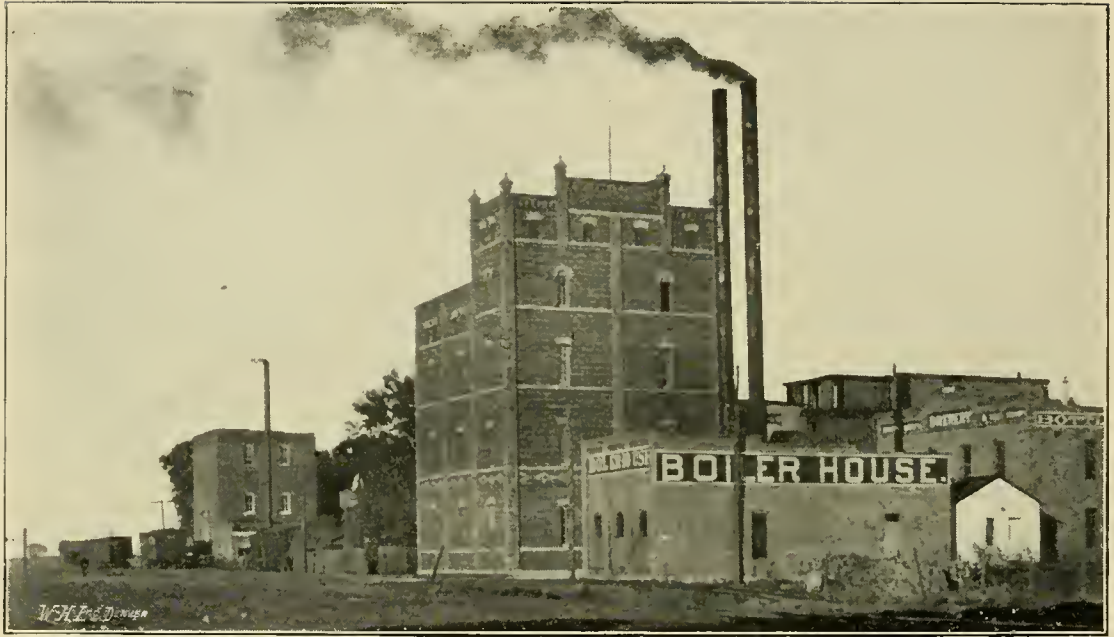
A LOGGING TRAIN IN OTERO COUNTY.

Conclusion.

New Mexico is in the making. Though old in years, it is new in development. Its beauties and attractions are not seen from the railroad cars, nor can its resources be measured with a cursory glance. It is only those who have spent some time in traveling over its vast expanse, who have studied the possibilities of its latent wealth and who have stayed sufficiently long to appreciate the charm of its blue sky and its perfect climate, and who have fallen under the spell of the romance and its unique beauty, who will declare that New Mexico is not only the peer, but that in many respects it is the superior of all other American commonwealths, be it in resources, opportunities, beauty or climate.



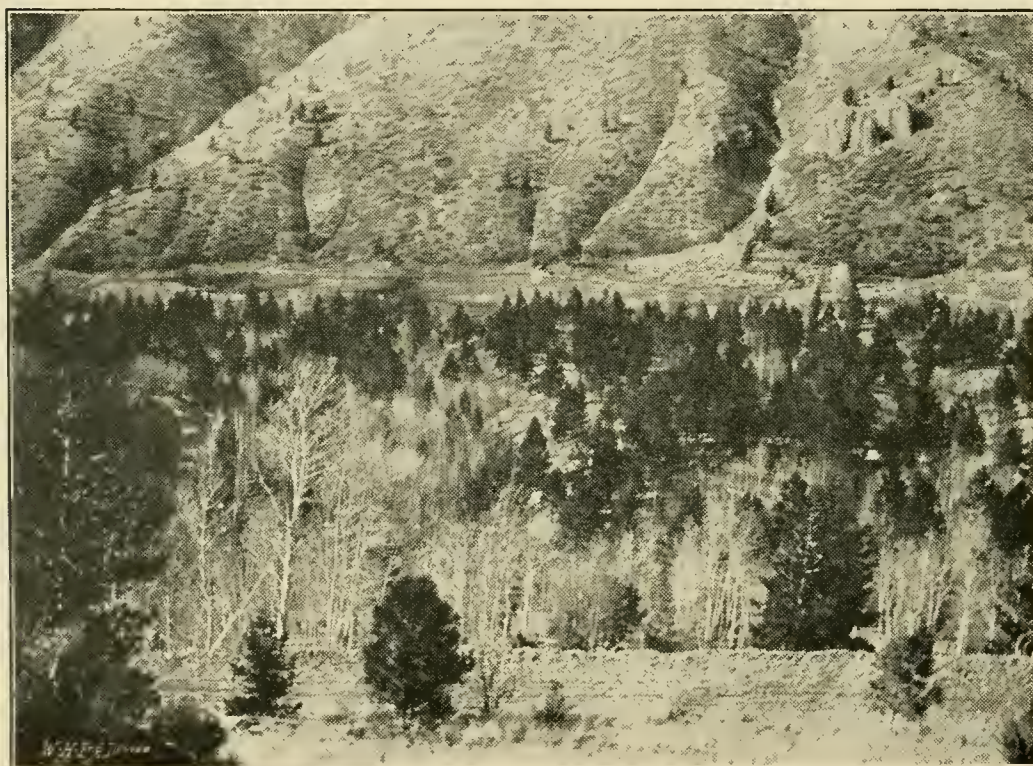
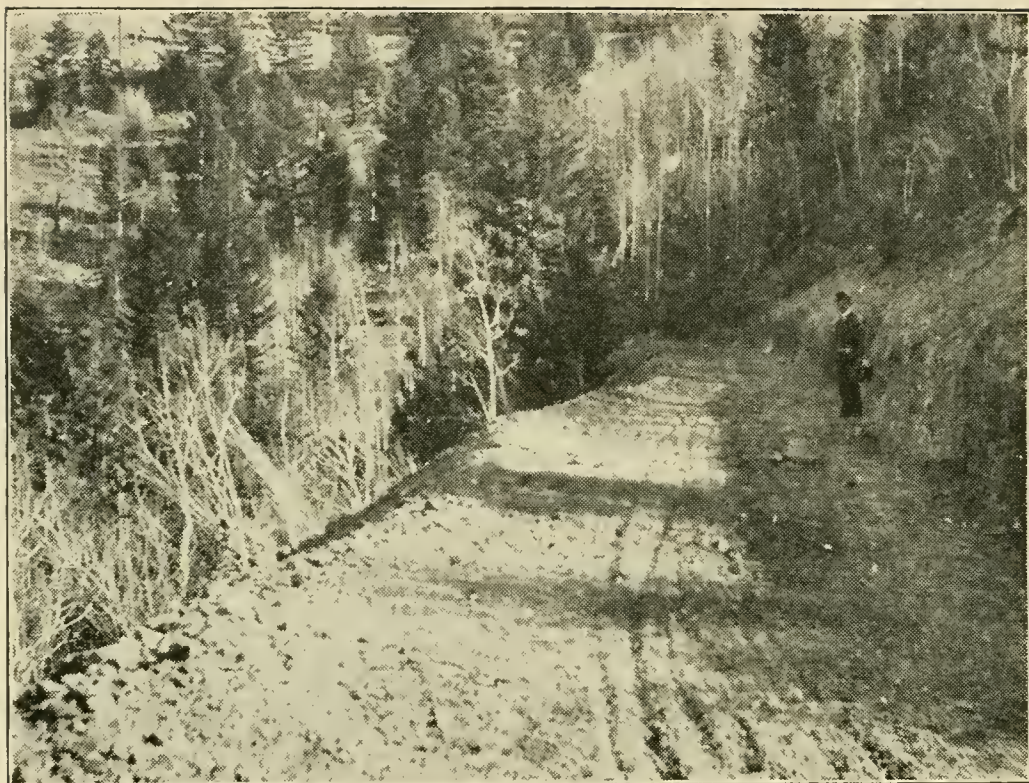
THE SCENIC ROUTE ROAD NEAR SANTA FE.



INDUSTRIAL ESTABLISHMENTS AT ALBUQUERQUE.

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ON THE SCENIC ROUTE ROAD NEAR SANTA FE.



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